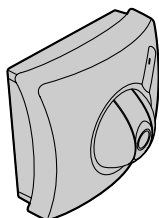


Panasonic



Network Camera Operating Instructions

Model No. **KX-HCM10**



PLEASE READ BEFORE USE AND SAVE.

Panasonic World Wide Web Address: <http://www.panasonic.com>
for customers in the USA or Puerto Rico

Introduction

Thank you for purchasing the **Panasonic Network Camera**.

When unpacking, check the following items.

| | |
|------------------------|-----------|
| CD-ROM | ----- one |
| Operating Instructions | ----- one |
| Getting Started | ----- one |

Note: Directory and file structure of this CD-ROM

The directory structure of this CD-ROM and the main files position are as follows.
To see the manuals in CD, it is necessary to use Adobe® Acrobat® Reader 4.05.

Main files included in the CD-ROM

| | |
|-------------------------------|-------------------------------------------------|
| ROOT | |
| └─ README.TXT | Readme file |
| └─ Setup.exe | Program to access CD-ROM |
| └─ AutoRun.inf | Information file to start Setup.exe |
| └─ Netcam | Network Configuration Setup Program directory |
| └─ Config.exe | Network Configuration Setup Program |
| └─ Acrobat4.0installer | Acrobat Reader 4.0 Installer directory |
| └─ ar405eng.exe | Acrobat Reader 4.0 Installer |
| └─ Manual | |
| └─ OprInstr.pdf | Operating Instructions MANUAL (=Acrobat Reader) |
| └─ OCX | "kxhcm10.ocx" Installer directory |
| └─ Reghcm10.exe | "kxhcm10.ocx" Installer |

Before Initial Use

Please read IMPORTANT SAFETY INSTRUCTION on Page 86 before use.
Read and understand all instructions.

FOR OPERATION ASSISTANCE:

- **Call** 1-800-272-7033
- **Refer to** the Panasonic world wide web site
<http://www.panasonic.com>

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The operating instructions are subject to change without notice.

For assistance, please call: 1-800-272-7033

Attach your purchase receipt here.

For your future reference

Serial No. _____
(found on the rear side of the unit)

Date of purchase _____

Name and address of dealer _____

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Section 1

Installation

1.1 Overview

1.1.1 Features

The main features of the Network Camera are described as follows.

Ease of Use

This network camera has its own built in web server. Once the camera is connected to your Ethernet network and the card is configured, JPEG images can be easily viewed on your standard Internet browser.

High Speed Motion JPEG

With the proper hardware you can display motion images at 15 fps.

Remote Pan and Tilt Control

The camera position can be easily adjusted from your web browser using the built in pan and tilt feature.

Multi-Camera Display

Up to four network cameras can be displayed on your web browser using the Multi-Camera configuration.

Multi Client Access

Your network camera can be viewed by up to ten users on your network.

I/O Connector

Added versatility is offered using the I/O sensor inputs. External alarm sensors (customer provided) allow the network camera to be used for surveillance applications.

The camera can notify the user of an intrusion by sending an e-mail alert or transferring a temporary buffered image to another Internet location using an FTP file transfer.

Easily Upgraded — Ease of System Administration

Downloadable Firmware

Anytime improvements or changes are made you'll be able to get the latest firmware at no charge from the Panasonic web site. Since the user interface is your web browser, it's fast and easy to do! See Page 65 for more detailed information.

Password Protection

For your network's protection your configuration settings can be password protected. See Page 46 for more detailed information.

1.1.2 System Requirements

To set up the Network Camera, the computer you use must meet the requirements shown in the table below.

| Item | Description |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating System | Microsoft Windows 95 operating system Microsoft Windows 98 operating system Microsoft Windows 2000 operating system Microsoft Windows ME operating system Microsoft Windows NT 4.0 operating system |
| Network Protocol | TCP/IP network protocol installed (HTTP, FTP, SMTP, TCP, UDP, IP) |
| Interface | 10/100Mbps Ethernet card with appropriate interface cable for your network connection |
| Web browser* | Internet Explorer 5.0 or later/Netscape Navigator 4.7 Please use Microsoft Internet Explorer version 5.0 or later (It is not included in the CD-ROM). |

* At this time (7/2001) Netscape v 6.xx is a beta release version. Some minor problems related to the display of motion JPEG images have been reported. We are confident that by time a final version of Netscape v 6.xx is released these issues will be corrected. If you experience any problems while using the beta release of Netscape v 6.xx we suggest using an earlier version.

Please refer to Panasonic web site (<http://www.panasonic.com>) about the newest information of web browser.

Note

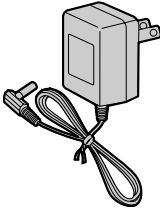
To prevent the limitation from the performance of the CPU inside the Computer, it is recommended to use a computer of Pentium II(300MHz) or more.

1.2 Included Accessories

For extra orders, call 1-800-332-5368.

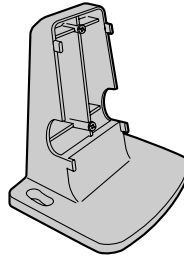
AC adaptor --- One

Order No. PQLV10Y



Stand --- One

Order No. PSKLHCM10M



Screws --- Two

Order No. PSHE5004Z

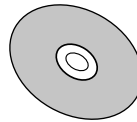
Washers --- Two

Order No. XWG35FY



CD-ROM --- One

Order No. PSQX2432



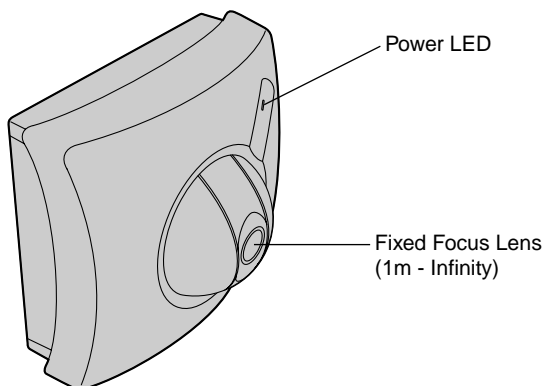
- If any items are missing or damaged, ask the dealer where you purchased the product.
- The order numbers listed above are subject to change without notice.
- Save the original carton and packing materials for future shipping and transportation of the unit.

Note

- Do not scratch, smudge, write or label either surfaces of Disc.
- Do not leave the Disc in direct sunlight, near a heat source or especially in a hot automobile.
- Do not use chemicals or cleanser to clean Disc.

1.3 Part Names

1.3.1 Front View



Information

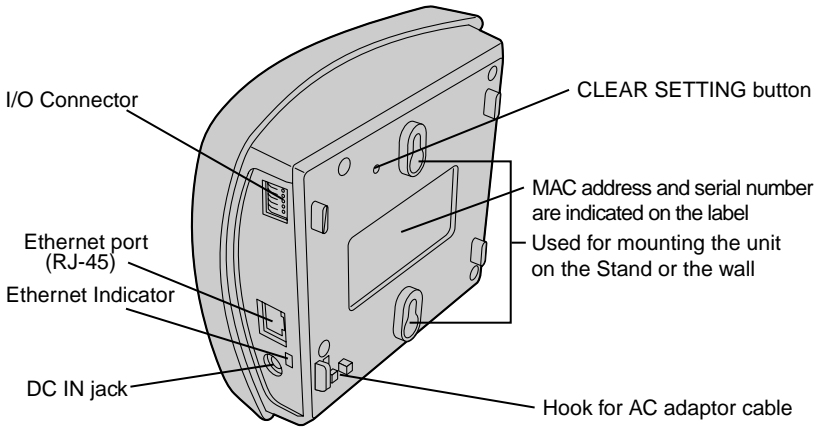
Power LED blinks in the following states.

- While lens moves to the Home Position after turning on the power.
- When performing Update Firmware.
- When you pushed CLEAR SETTING button.
- The KX-HCM10 hardware is defective. Please refer to Section 4.2 Troubleshooting.

CAUTION

- Network Camera is intended for indoor use only. Prolonged exposure to direct sunlight or halogen light may damage the CMOS sensor.
- If you display the same image on the PC monitor for a long time, damage of the monitor such as sticking may occur. You should use screen saver.
- Do not force the movement of the camera while panning or tilting the view. This can damage the internal drive motors.
- Do not touch the lens. It may leave a finger print and can cause the image to be out of focus. This can also damage the protective coating on the lens.

1.3.2 Rear View

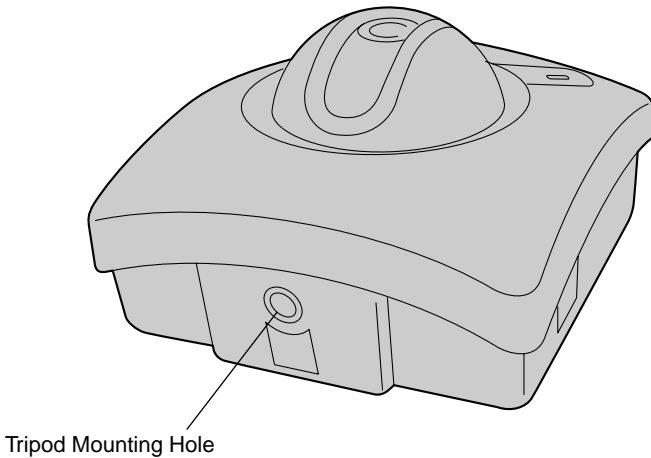


* Use category 5 cross cable when KX-HCM10 is directly connected to PC.

CAUTION

Use ONLY with Panasonic AC adaptor (Order No. PQLV10Y).

1.3.3 Bottom View

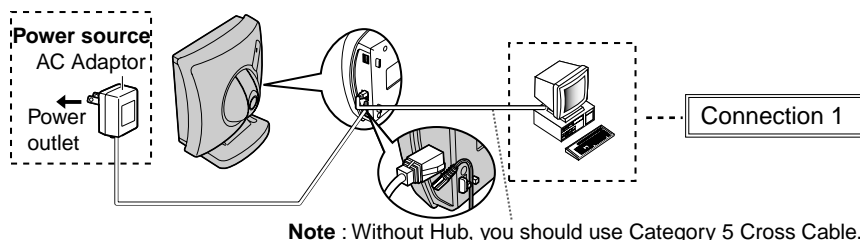


1.4 Setup

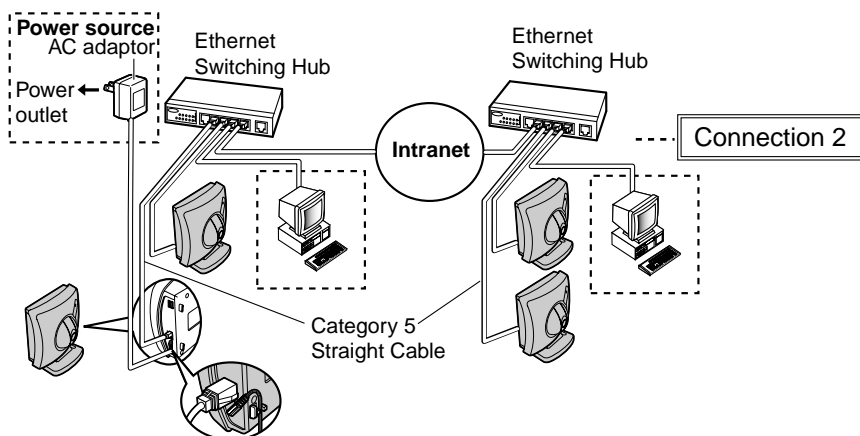
Please confirm the connection of your network into following figure and check the Connection No. 1 - 6. This Connection No. is used by explanation of Section 1.5 Network Camera Configuration.

1.4.1 Diagram of Connections

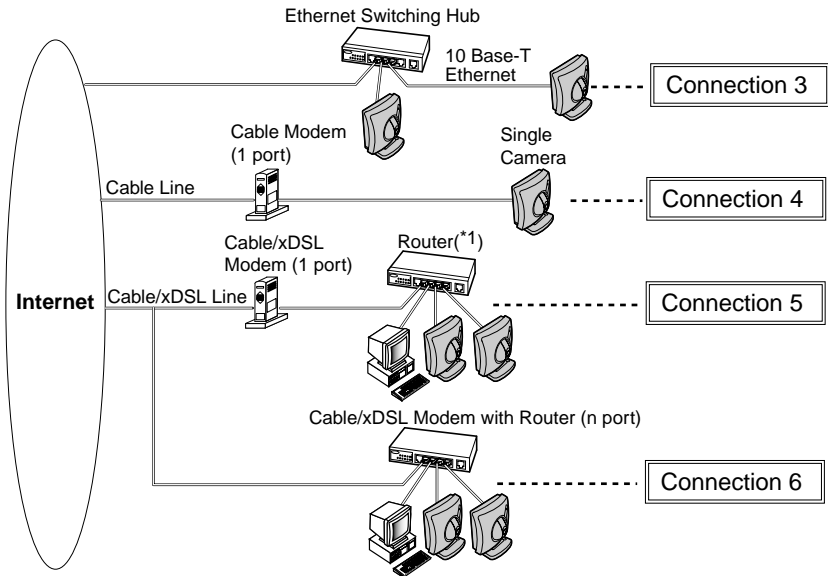
Direct Connection to Personal Computer (without Ethernet Hub)



Intranet Connection with Ethernet Hub



Internet Connection



Information

*1) Router or Panasonic Broadband Networking Gateway KX-HGW200

1.4.2 Preparation

Before starting to install the Network Camera, make sure that you have everything:

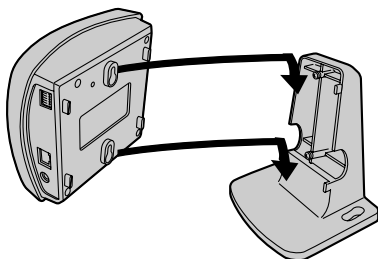
- A Windows computer with web browser software, Ethernet card and TCP/IP installed.
- Ethernet Hub for LAN connection.
- Two Category 5 straight cables for Computer-Ethernet Hub and Network Camera-Ethernet Hub connections.

1.4.3 Mounting

You can install the Network Camera in the following ways.

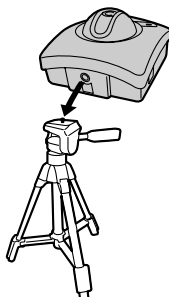
Installing on the Stand

- a)** Fix the Network Camera to the Stand.



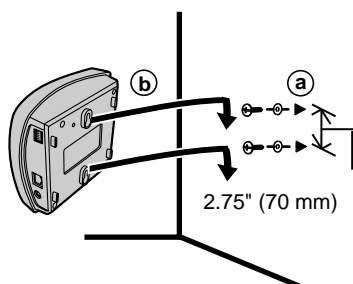
Installing on a tripod

- a)** Attach the Network Camera to the tripod by using the tripod bolt.



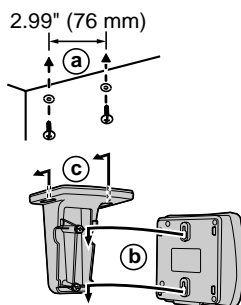
Installing on the wall

- a)** Screw the two screws (accessories) into the wall. The distance of two screws should be 2.75" (70 mm).
- b)** Fix Network Camera to the screws.



Installing on the ceiling

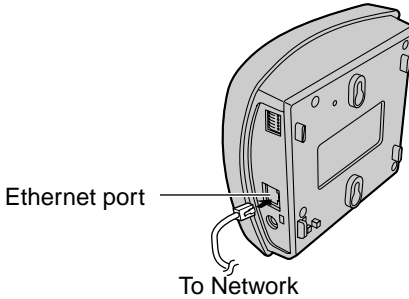
- a)** Screw the two screws (accessories) into the ceiling. The distance of two screws should be 2.99" (76 mm).
- b)** Fix Network Camera to the Stand.
- c)** Fix Network Camera to the screws.



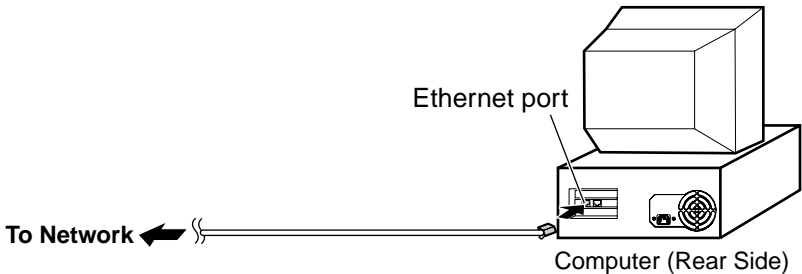
(b), (c): Fix the unit tightly by sliding it.

1.4.4 Connecting the Network Camera to Network

1. Connect the category 5 straight cable to Ethernet port of the Network Camera and Ethernet Hub.



2. Connect the category 5 straight cable to the LAN port of the computer and Network.

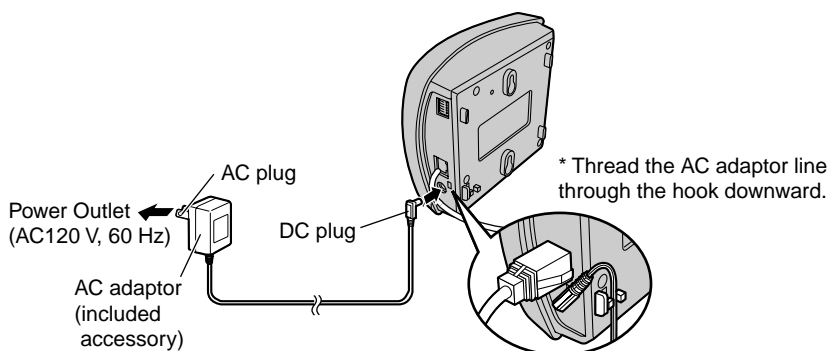


Note

If you connect Network Camera to PC directly, you should use Category 5 Cross Cable.

1.4.5 Turning on the Network Camera

1. Connect the DC plug of the AC adaptor to the DC IN jack of the Network Camera and connect the AC plug of the AC adaptor to the power outlet to turn on the Network Camera.



CAUTION

- The AC Adapter is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.
- Use Only with Panasonic AC adaptor (Order No. PQLV10Y).

2. After the power is connected the Network Camera will initialize. The power LED will come on and the pan - tilt motors will adjust themselves.

1.5 Network Camera Configuration

In order to set up Network Camera Configuration, the following items are used in this Section.

- Static : IP Address/Subnet Mask or DHCP (Dynamic Host Configuration Protocol) : Host Name
- Port No.
- Default Gateway
- DNS Server1/DNS Server (DNS : Domain Name System)
- DDNS (Dynamic Domain Name System) : Your E-mail Address/Personal (Camera) URL/Purchase Link

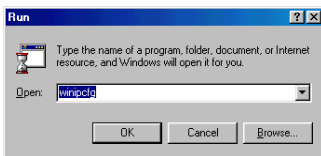
Please confirm it from your network administrator.

Information:

If you want to know the IP Address and Subnet Mask of your PC, please check the following procedure.

When you use Windows 95, 98 or ME as Operating System.

From the **Start** Menu of Windows, select the **Run....**
The screen below appears.



Enter the **winipcfg** in data field and click **OK** .

You can confirm the Network Information of your PC.

When you use Windows 2000 or NT as Operating System.

Start the **Command Prompt** program (Start → programs → accessories → Command Prompt), and enter the [ipconfig].

C:\>ipconfig

You can confirm the Network Information of your PC.

1.5.1 Setup the Network Camera

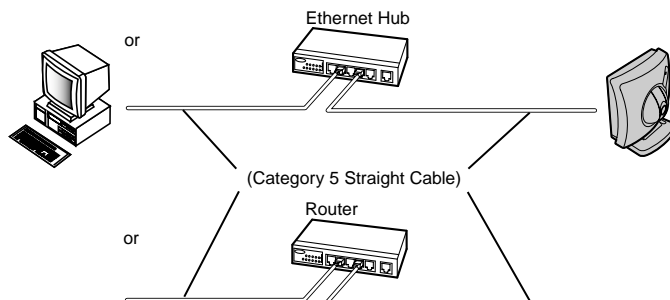
In this section, we explain how to setup the Network Camera.

Using the attached CD-ROM, you can setup the Network Configuration of the Network Camera easily.

1. Setup Connection

It is necessary to connect locally PC and Network Camera, as follows.

(Without Ethernet Hub, you should use Category 5 Cross Cable.)

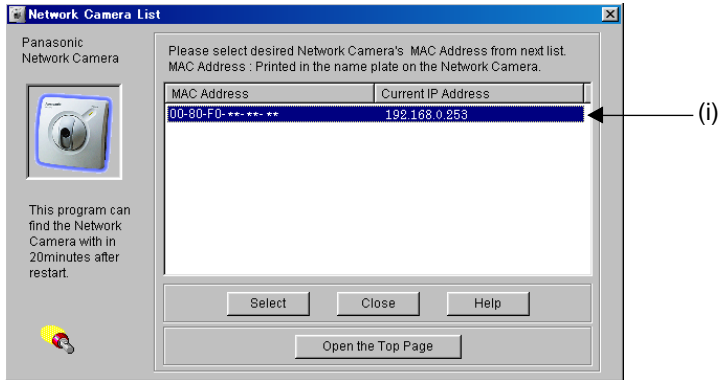


2. Insert the Setup CD-ROM in the CD-ROM Drive of your computer. The following screen is displayed.

(If the screen does not appear, please open "setup.exe" file in the CD-ROM.)



3. After confirmation of connecting of the Network Camera to a network, turn on the power again.
4. Click **Network Configuration** button.
The following Network Camera List is displayed.



Note

Ethernet defines a 48-bit addressing scheme. Each computer or device attached to an Ethernet network is assigned a unique 48-bit number known as its Ethernet address. To assign an address, Ethernet hardware manufacturers purchases blocks of Ethernet addresses and assign them in sequence as they manufacture Ethernet interface hardware. Thus, no two hardware interfaces have the same Ethernet address. Usually, the Ethernet address is fixed in machine readable form on the host interface hardware. Because each Ethernet address belongs to a hardware device, they are sometimes called *hardware addresses*, *physical addresses*, *media access (MAC) addresses*, or *layer 2 addresses*. In this manual, we use the term MAC address.

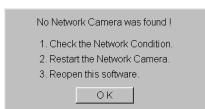
5. Setup software finds all the Network Cameras which are connected in the local area network. Then MAC Address and IP address of the existing Network Camera are listed on the Box (i).

Note

- Each Network Camera has a unique MAC address which is indicated on the label of back panel formatted as 00-80-f0-xx-yy-zz.
- You should know the MAC address of the target Network Camera which you want to setup, in case there are many cameras on the LAN.
- Addresses of all Network Cameras which are connected to local area network are displayed.
- If the IP address of the Network Camera is not found and an error message is displayed, please do the following steps.
 1. Disconnect the power from the Network Camera.
 2. Check to see that cables are connected properly.
 3. Reconnect the power and run the Setup Program again. The Setup Program cannot find the Network Camera if it passes 20 minutes after

turning on the power of the Network Camera.

4. During this process the Ethernet LED adjacent to the network connector should be flashing.



6. Select your target Network Camera in Box (i) and click the **Select** button. The following Configuration screen is displayed.

See the Page 23 for instructions about each data fields.

Confirm the Connection No. of Section 1.4.1 Diagram of Connections, and please setup the (ii) - (vi) of following items.

When you use Connection 1 in Section 1.4.1

(ii): Set to 80. [Default]

(iii): Check the Static and set Static IP Address and Subnet Mask.

(iv), (v), (vi): You don't need to set these items.

When you use Connection 2 or 3 in Section 1.4.1

- (ii): Set to 80. [Default]
- (iii): Check the Static and set Static IP Address and Subnet Mask.
- (iv): If you use Gateway, you need to set it.
- (v) : If you use DNS (Domain Name System) Server, you need to set it.
- (vi) : You don't need to set this item.

When you use Connection 4 in Section 1.4.1

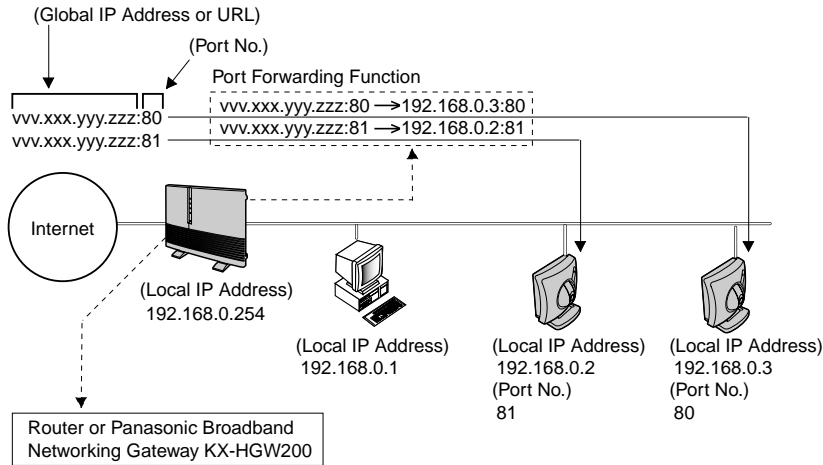
- (ii): Set to 80. [Default]
- (iii): Check and set ISP specified Static IP Address or DHCP function. If you set DHCP function, please need to set DDNS box (vi).
- (iv): If you use Gateway, you need to set it.
- (v) : If you use DNS Server, you need to set it.
- (vi) : If ISP (Internet Service Provider) specified Address of Cable/xDSL Modem is not Static, you need contract and registration to DDNS (Dynamic Domain Name System) service.
Please refer to an attached leaflet for DDNS service. If you set Static IP Address at box (iii), you don't need to set this item.

When you use Connection 5 or 6 in Section 1.4.1

- (ii): Set the unique Port No. for each Network Camera.
And you need to set the Port Forwarding (*1) function for Router.
- (iii): Check the Static and set Static IP Address which is assigned by Router and Subnet Mask.
- (iv): You need to set IP Address of Router.
- (v): If you use DNS Server, you need to set it.
- (vi): If ISP specified Address of Cable/xDSL Modem is not Static, you need contract and registration to DDNS (Dynamic Domain Name System) service.
Please refer to an attached leaflet for DDNS service.

Information:(*1) Port Forwarding

It is required for a Router to be setup following port forwarding function which translate a global address to a local address, and assign an unique port No. for each camera.



(vii) is Max. bandwidth Usage setting. It can restrict the transmit bandwidth.

Instructions for the data fields

| | | |
|-----|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ii | Port No.** | <ul style="list-style-type: none">You can setup the port No. of Network Camera. (Default value is 80.) If you use Router (including KX-HGW200) and two or more cameras are connected with the network, it is necessary to setup the unique port No. of each camera and except the following Port No..Using with other network products.Using with Network Camera (20, 21, 25, 110). |
| iii | Static* <ul style="list-style-type: none">IP AddressSubnet Mask | <ul style="list-style-type: none">Please check Static, when specifying the IP Address assigned to the Network Camera from your network administrator or ISP (Internet Service Provider). And enter the specified IP Address and Subnet mask in each data field. |
| | DHCP*** <ul style="list-style-type: none">Host name | <ul style="list-style-type: none">Please check DHCP (Dynamic Host Configuration Protocol), when you use Single Camera and the ISP uses the DHCP server function which assign an IP Address to the Network Camera automatically. And enter the Host name. |

Instructions for the data fields

| | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| iv | Default Gateway* | <ul style="list-style-type: none"> Enter the Default Gateway address in this data field. |
| v | DNS Server* | <ul style="list-style-type: none"> Enter the DNS (Domain Name System) IP address in these data fields. You can setup DNS IP Address in two. |
| vi | DDNS <ul style="list-style-type: none"> Your E-mail Address**** Personal (Camera) URL Purchase Link | <ul style="list-style-type: none"> If ISP specified Address of Cable/xDSL Modem is not Static, you need contract and registration to DDNS (Dynamic Domain Name System) service. Please check DDNS Enable and refer to an attached leaflet for DDNS service. |
| vii | MAX Band Usage | <ul style="list-style-type: none"> It can restrict the transmit bandwidth. Select the max bandwidth usage, 0.1Mbit/s to Unlimited Mbit/s. |

*: Must be composed of four numeral characters (0 to 255) and divided with 3 dots, such as 192.168.0.253. (Can not use "0.0.0.0" and "255.255.255.255")

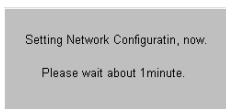
** : Numeral characters only (1 - 65535)

***: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

****: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126) and need the [@] and domain name of e-mail, such as [text] + [@] + [text] + [.] + [text].

7. If you setup required items, click **Save**.

The following screen is displayed.



And the following message is displayed when you finish correctly.

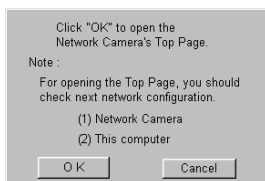


Note

- The Network Camera is automatically reset after setting up the Network Configuration.
- When the following message is displayed, the IP address seems to be overlapped.
Verify the IP Address to the network administrator, and enter the correct IP address.



Please click **OK**. And then, next screen is displayed.



If you want to open the Top Page, Click **OK**.
Refer Section 1.5.3 Confirmation of the Network setup after this operation.

Note

- If the Top Page does not appear, setup of your computer is required following Section 1.5.2 Setup the Computer.
- If you set DHCP, please click **Open the Top Page** button in Section 1.5.1-4 to open the Top Page.

1.5.2 Setup the Computer

- When the proxy server is not used : The following setup is not necessary.
- When the proxy server is used : The following setup is necessary.

If the proxy server is not used, please go to Section 1.5.3 Confirmation of the Network setup.

If your network using proxy server, it is recommended to change the setting of the web browser not to use the proxy server for the communication with the IP address of the Network Camera.

In some corporate environments the use of a proxy server with a firewall may prevent you for connecting directly to the Network Camera. In these cases we suggest discussing the installation with your network administrator so that the installation will not affect the operation of the network or the Network Camera.

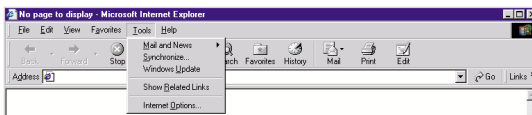
Note

- A proxy server is generally used to maintain security on a network that offers an Internet connection. When a Network Camera is installed on a network using a proxy server some problems may result. Before making any changes we suggest that you contact your network administrator for assistance. Use of this camera with a proxy server can also result in a decrease in video frame rate.

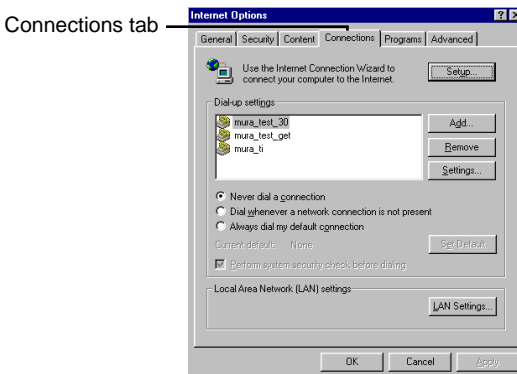
Web browser Setting for Proxy Server

The steps below are for Internet Explorer 5.50

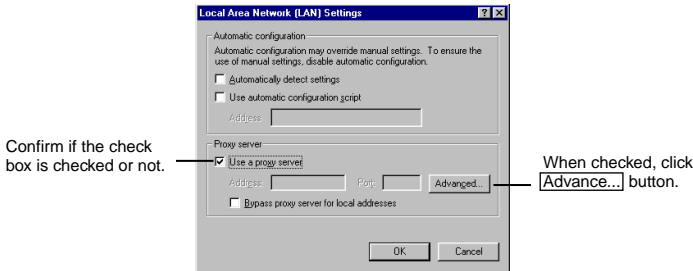
1. Start up the web browser.
2. From the **Tools** menu, select **Internet Options....**



3. Click the **Connections** tab.



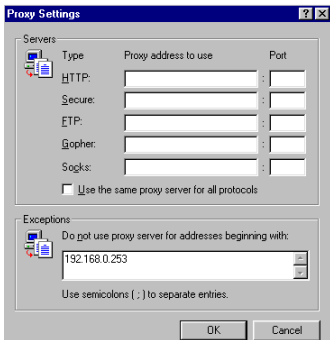
- Click the **LAN Settings...** button. The **Local Area Network [LAN] settings** dialogue box appears.
- In this box, confirm if the **Use a proxy server** check box is checked or not.



If the check box is not checked, web browser setting for a proxy server is not necessary and click **Cancel** button and skip the following procedures.

If the check box is checked, click **Advanced...** button and the **Proxy Settings** dialogue box appears.

- Enter "192.168.0.253" (or your acquired IP address of Network Camera from network administrator) into the **Do not use proxy server for addresses beginning with** data field.



- Click **OK**. And setting is completed.

1.5.3 Confirmation of the Network setup

The Network Camera has a built-in web server function. If you can access Top Page of the Network Camera, the setup of the computer and the Network Camera has been successfully made.

Follow the steps below and confirm the setup.

1. On the computer, start up your web browser.
2. Enter "**http://IP Address (or URL):Port No.**" in the address field of your web browser and press . When Port No. is set as 80 (default), you don't need to input Port No..
 - If the Top Page of the Network Camera appears as below, the setup is completed.



- If the Top Page does not appear, please check the following items:
1. Make sure that you typed in the correct IP address and Port No. to your browser "**http://192.168.0.253:80**" or other if changed from the factory default setting. When Port No. is set as 80 (default), you don't need to input Port No..
 2. Make sure that the settings of the Network Camera and your computer described in the sections 1.5.1 Setup the Network Camera, 1.5.2 Setup the Computer are correct. Also check sections 1.4.4 Connecting the Network Camera to Network and 1.4.5 Turning on the Network Camera.

Important Information:

The KX-HCM10 Network Camera is designed to work with 10 Mbps networks, cable modems or DSL Internet connections.

If the Network Camera is used with a 56K Internet dial-up connection the available bandwidth may not be adequate to allow motion video to work properly. In this case, we suggest using regularly refreshed JPEG image captures (No.2 on Top page) until the connection can be increased. On some networks the available bandwidth maybe intentionally restricted to lock out streaming audio or video services.

In these cases you may not be able to see motion video. Here again we suggest using regularly refreshed still JPEG image captures.

Section 2

Using Network Camera Web screen

2.1 Table of Contents for Section 2

Setup Items to the beginning

- Network Configuration (Essential) ----- Page 42
- Setup Time ----- Page 45

Seeing the Flow of Web screen ----- Page 32

Using Top Page & Top View Image

- Using the Operation Bar ----- Page 36
- Using the Buffer Memory ----- Page 38
- Using the Multi-Camera
 - About Multi-Camera Image ----- Page 39
 - Setup Multi-Camera Image ----- Page 62
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Using the Image transfer

- Transfer the Image using Alarm Sensor
 - Setup Alarm trigger items ----- Page 51
 - Setup Digital Output Control ----- Page 63
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 - Setup DNS Address ----- Page 43
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 - Setup Timer trigger items ----- Page 57
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Using the Authentication Page

- Setup Administrator ----- Page 46
- Setup General User ----- Page 47

Update Firmware ----- Page 65

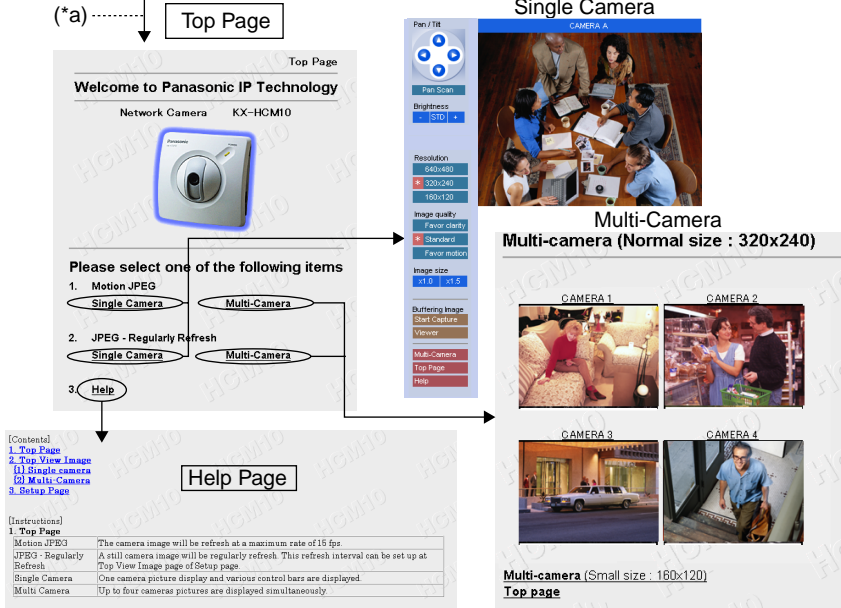
Other Functions

- Camera Setup ----- Page 60
- LED Control ----- Page 64
- Restart the Camera ----- Page 64
- Reset to Factory Default ----- Page 67

2.2 Flow of Network Camera Web screen

About the Top Page and Top View Image Page

Enter "http://IP Address (or URL) : Port No." in the address field of your web browser and press **[Enter]**. When Port No. is set as 80 (default), you don't need to input Port No..



Information: (*a)

It is possible to display the following **Authentication Page** at the time of the link at (*a).

Enter Network Password

Please type your user name and password.

Site: 192.168.0.253

Realm: KX-HCM10

User Name:

Password:

☐ Save this password in your password list

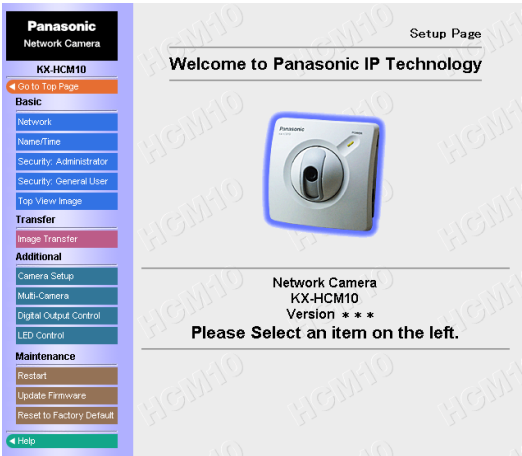
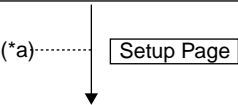
OK Cancel

Please note that "User Name" and "Password" are case sensitive.

In a factory setup, Authentication Pages are not displayed. For details, please refer to Page 47.

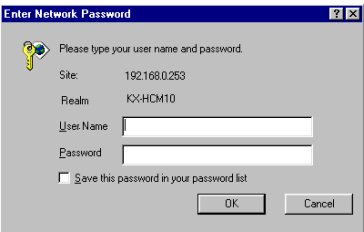
About the Setup Page

Enter "http://IP Address (or URL) : Port No./config.html" in the address field of your web browser and press Enter. When Port No. is set as 80 (default), you don't need to input Port No..



Information: (*a)

It is possible to display the following Authentication Page at the time of the link at (*a).



Please note that "User Name" and "Password" are case sensitive. In a factory setup, Authentication Pages are not displayed. For details, please refer to Page 47.

2.3 Using the Top Page and Top View Image Page

2.3.1 Using the Top Page

In Top Page, you can select to link Motion JPEG/JPEG - Regularly Refresh, Single Camera/Multi-Camera, and Help.

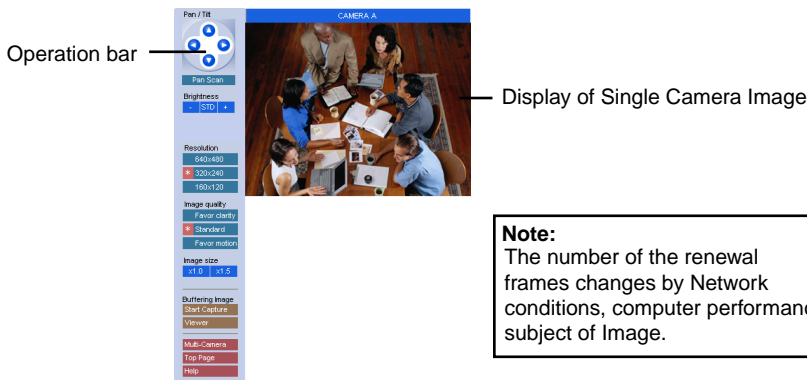


| | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion JPEG | <ul style="list-style-type: none"> The camera image will be refreshed continuously, like a motion image. (In general, it is called the server push mode.) |
| JPEG – Regularly Refresh | <ul style="list-style-type: none"> The camera image will be refreshed periodically. This refresh interval can setup at Top View Image of Setup Page. (In general, it is called the client pull mode.) |
| Single Camera | <ul style="list-style-type: none"> One camera image and operation bar are displayed. |
| Multi-Camera | <ul style="list-style-type: none"> Up to four camera images are displayed simultaneously. |

2.3.2 Using Top View Image Page

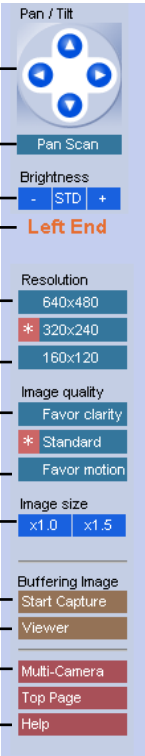
Single Camera Screen

When you select Single camera from Top Page, the screen below appears.



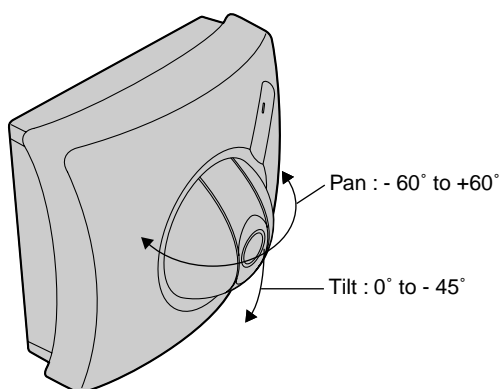
The Network Camera Image screen does not appear.

1. When Internet Explorer is used for a browser, it is necessary to download ActiveX program.
Please set Security Level of Internet Explorer as less than Standard temporarily (**Tools menu → Internet Options → Security tab → Custom level**) and access it again. (Since ActiveX program is saved in computer if it reads once, it should return Security Level after you can check a display of image.)
2. When you change the IP address of Network Camera, enter the new IP address in the address field of the browser.
3. According to the status of the network, the web screen may not appear quickly. Wait for a while.
4. When Network Camera is accessed via a proxy, please setup not to use a proxy.

| | No. | Item | Description |
|----------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| About operation bar  | (1) | Pan & Tilt | Click the arrow button to perform the Pan/Tilt operation. |
| | (2) | Pan Scan | It returns to the present position after moving in the whole PAN movable range. |
| | (3) | Brightness (a) [STD] (b) [-], [+] | Brightness control is 9 steps include [STD]. (a) The standard image brightness is set. (default) (b) Change the brightness of image. |
| | (4) | End & Locked display | End display: Pan or Tilt operation display having reached end of corner. It is displayed Left End, Right End, Up End or Down End . Locked display: If Pan/Tilt/Brightness control are disabled by Camera Setup of Setup Page or Capture Control are disabled by Image Transfer Page of Setup Page, it is displayed Locked when you click these buttons. |
| | (5) | Resolution | Select the Image Resolution to 640 x 480, 320 x 240 (default) or 160 x 120. |
| | (6) | Image quality (a) Favor clarity (b) Standard (c) Favor motion | Select the Image quality (a) Priority is given to the high image quality. (b) The standard image quality is set. (default) (c) Priority is given to the fast motion of the image. |

| | No. | Item | Description |
|--|-----|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| | (7) | Image size | Select the Image size to x 1 (default) or x 1.5. (The 1.5 times mode only expands image size 1.5 times, but the resolution does not go up.) |
| | (8) | Buffering Image (a) Start Capture (b) Viewer | :(Case 1) Refer to Next Page (a) The Live Image is temporarily preserved. (b) The captured Image is played back. |
| | (9) | Multi-Camera Top Page Help | The Multi-Camera screen appears. The Top Page viewer appears. The Help Page viewer appears. |

Operation range of Pan & Tilt :



Note

- When an image does not come out or irregular, please push the Refresh or Reload button of your browser.

Buffering Image Explanation

A display of Buffering Image of operation bar is changed according to Image Transfer mode setting.

Please refer to Page 50 about Image Transfer mode.

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p style="text-align: center;">Case-1</p> <p style="text-align: center;">"Non transfer" condition in "Image Transfer" menu.</p> <div data-bbox="234 441 388 532"> <p>Buffering Image</p> <p>Start Capture</p> <p>Viewer</p> </div> | <p style="text-align: center;">Case-2</p> <p style="text-align: center;">"Alarm or Timer" condition in "Image Transfer" menu.</p> <div data-bbox="672 441 826 532"> <p>Buffering Image</p> <p>Primary</p> <p>Secondary</p> </div> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

[Start Capture] button

Current image will be captured in internal memory when click the "Start Capture" button.

This image condition is the same as current resolution and image quality.

Captured time is normally about 5 to 20 seconds.

(Captured time and the number of sheets in buffering image is restricted in a memory, the resolution, the image quality, and subjects of a image. On condition that 320×240 and Standard, it is about 80 sheets.)

Note

About Image buffering by Start Capture

- (1) If a internal memory is filled after start capture, Image buffering will stop automatically.
- (2) If Start Capture is newly pushed and Image Buffering is started, former image data will be eliminated unconditionally.
- (3) Even if when seeing the capture image, capture image is updated by click on [Start Capture] button.

[Viewer] and [Primary] and [Secondary] button

[Viewer] : The Images buffered by "Start Capture" button is displayed.

[Primary]: The Images buffered by "Primary condition" in "Alarm" or "Timer" is displayed.


[Secondary]: The Images buffered by "Secondary condition" in "Alarm" or "Timer" is displayed.

When the [Viewer], [Primary], or [Secondary] is clicked, Buffering Image viewer appears as follows.

Buffering Image

1. Buffering Image Viewer

No. 10 Date: Jan. 1 2001 12:00:00 000 AM



<<Page <Prev Play Next Page>>

2. Single Camera
3. Top Page
4. Help

Capture Image Number, Date and Time are displayed.

Play

The buffered Image is displayed continuously.

Prev & Next

The previous image and next image about the current image is displayed.

<<Page & Page>>

The 10 sheets previous image or next image about the current image is displayed, when it buffered.


CAUTION

- Buffered images will clear when following operation.
- Turning off the power, Restarting, Update Firmware, Reset to Factory Default.
 - "Image Transfer" or "Name/Time" menu page is saved.
 - Push the "Start Capture" button.

Multi-Camera

When you select Multi-Camera by Top Page, the next screen appears.

Multi-camera (Normal size : 320x240)



CAMERA 1 CAMERA 2
CAMERA 3 CAMERA 4

Multi-camera (Small size : 160x120)
Top page

Link to each Single Camera when click the each camera name on the each image.

Display of Multi-Camera Image.

The image size (with 4 screens) is changed.

Note

- In order to use the Multi-Camera view mode, Multi-Camera configuration must be configured on each camera. Once this has been done you can select either mode from any camera in the system. Please refer to Page 62.
- It is impossible to display the Resolution of 640 x 480 at Multi-Camera mode.

- When you see the image of two or more cameras in Multi-Camera, it is recommended to use Ethernet Switching Hub. If Ethernet Switching Hub is not used, renewal of an image may become slow.

If the image of Multi-Camera does not displayed.

1. Make sure the IP address of each camera setting and connection.
2. Make sure the Multi-Camera setting of Setup Page.
3. Make sure the each camera's proxy setting are removed.

Information**How to save the still image to computer**In the case of Single Camera and Multi-Camera mode

- Still images taken in Regularly Refreshed mode can be saved to your PC.

Motion JPEG images cannot be saved. To save the image place your mouse on the image and click the right button. In the window that appears select "Save Picture As...". Assign picture a name and save. It is recommended to set up the Interval time of Regularly Refresh at 30 seconds or more.

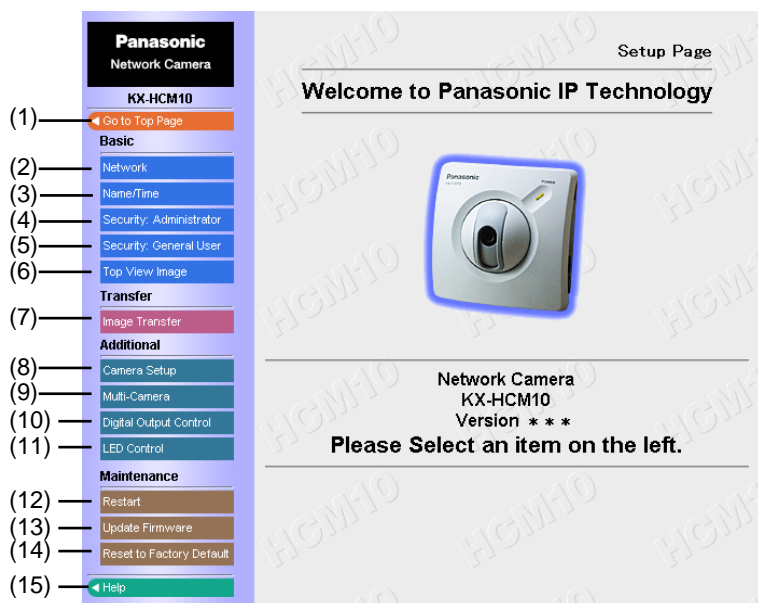
In the case of Buffering Image mode

- It is possible to save the image to computer except for [Play] mode. Please click the right button of a mouse on captured image which you want to save, and select "Save Picture As...".

2.4 About the Network Camera Setup Page

Enter "**http://IP Address (or URL):Port No./config.html**" in the address field of your web browser and press . When Port No. is set as 80 (default), you don't need to input Port No..

The Setup Page screen below appears.



| No. | Item | Description |
|-----|--------------------------------|----------------------------------------------------------------------------------------------|
| (1) | Go to Top Page | Motion JPEG/JPEG-Regularly Refresh, Single/Multi Camera selecting. |
| (2) | Network | Network Configuration setting (Static/DHCP, Default Gateway, Port No., DNS, DDNS, Bandwidth) |
| (3) | Name/Time | Camera Name and Time setting. |
| (4) | Security: Administrator | Authentication Enable, Administrator ID, Password setting. |
| (5) | Security: General User | General User Security items (General User ID, Password)setting. |

| No. | Item | Description |
|------|---------------------------------|---------------------------------------------------------------------------------------------------|
| (6) | Top View Image | Image Resolution, Image Quality, Regularly Refresh interval setting. |
| (7) | Image Transfer | Trigger: mode, time, method, buffering, mail & FTP setting. |
| (8) | Camera Setup | White Balance, Power line frequency, Pan/Tilt/Brightness setting. |
| (9) | Multi-Camera | Multi-Camera setting (up to 4 cameras) |
| (10) | Digital Output Control | Digital output setting (Open or Short to GND) |
| (11) | LED Control | Power LED Control setting. (ON or OFF) |
| (12) | Restart | Restart the Network Camera with all the parameters preserved. |
| (13) | Update Firmware | Update Firmware setting. |
| (14) | Reset to Factory Default | Initialize all the parameters to the factory preset. |
| (15) | Help | Provides you with instructions about the commands and functions of the Network Camera Setup Page. |

2.4.1 Using the Functions

Go to Top Page

Top Page screen allows you to select the Top Page items.

1. Click the [Go to Top Page](#) button on the Network Camera Setup Page.
See the Network Camera Top View Image Screen.

Network

Network screen allows you to set the following Network parameters.

- You can set disable Network Configuration from Setup Program of CD-ROM for network security.
- You can set up the Port No., Static/DHCP, Default Gateway, DNS, DDNS, MAX Bandwidth Usage. (Network Setup items of this section are as same as Setup items of CD-ROM.)

1. Click the **Network** button on the Network Camera Setup Page.
The next screen appears.

Network

1. Network Configuration from Setup Program ☒ Enable

After setting network configuration, you must set disable for network security.

2. Internet Connection

Port No.

☒ Static

Enter the proper address (required)

IP Address

Enter the proper mask (required)

Subnet Mask

☐ DHCP

Host Name

Current IP Address 192.168.0.253

Current Subnet Mask 255.255.255.0

3. Default Gateway

In case of communication over the Gateway, you must enter the proper address.

Gateway

4. DNS

In case of Host Name in E-Mail or FTP function, you must enter the proper address.

DNS Server1

DNS Server2

5. DDNS ☐ Enable

In case of obtaining an IP Address automatically in your camera or router, you should set enable for Internet connection.

Your E-Mail Address

Personal (Camera) URL

Purchase Link

6. Max Bandwidth Usage Mbps

2. Enter each parameter in the proper data field.
 - To reset the current settings, click **Cancel**.
Then it returns to Setup Page, without saving setting value.
3. When you have finished, click **Save**.
 - The setting will be saved.

Instructions for the data fields

| | |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Configuration from Setup Program | <ul style="list-style-type: none"> You can set disable Network Configuration from Setup Program of CD-ROM for network security. |
| Port No.** | <ul style="list-style-type: none"> You can set up the port No. of Network Camera. (Default value is 80.) If you use Router (including KX-HGW200) and two or more cameras are connected with the network, it is necessary to setup the unique port No. of each camera and except the following Port No.. Using with other network products. Using with Network Camera (20, 21, 25, 110). |
| Static* <ul style="list-style-type: none"> IP Address Subnet Mask | <ul style="list-style-type: none"> Please check Static, when specifying the IP Address assigned to the Network Camera from your network administrator or ISP (Internet Service Provider). And enter the specified IP Address and Subnet mask in each data field. |
| DHCP*** <ul style="list-style-type: none"> Host name | <ul style="list-style-type: none"> Please check DHCP (Dynamic Host Configuration Protocol), when you use Single Camera and the ISP uses the DHCP server function which assign an IP Address to the Network Camera automatically. And enter the Host name. |
| Default Gateway* | <ul style="list-style-type: none"> Enter the Default Gateway address in this data field. |
| DNS Server* | <ul style="list-style-type: none"> Enter the DNS (Domain Name System) IP address in these data fields. |
| DDNS <ul style="list-style-type: none"> Your E-mail Address**** Personal (Camera) URL Purchase Link | <ul style="list-style-type: none"> If ISP specified Address of Cable/xDSL Modem is not Static, you need contract and registration to DDNS (Dynamic Domain Name System) service. Please check DDNS Enable and refer to an attached leaflet for DDNS service. |
| MAX Band Usage | <ul style="list-style-type: none"> It can restrict the transmit bandwidth. Select the max bandwidth usage, 0.1Mbit/s to Unlimited Mbit/s. |

*: Must be composed of four numeral characters (0 to 255) and divided with 3 dots, such as 192.168.0.253.(Can not use "0.0.0.0" and "255.255.255.255")

** : Numeral characters only (1 - 65535)

*** : Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

**** : Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126) and need the [@] and domain name of e-mail, such as [text] + [@] + [text] + [.] + [text].

Information:

As an example, the normal file size of JPEG one sheet image is as follows. (Image quality is set as Standard.)

- 160×120 : about 3.5kbyte
- 320×240 : about 15kbyte
- 640×480 : about 20kbyte

The file size changes by Image Quality and subject conditions (Brightness, subject, etc).

Name/Time

Name/Time screen allows you to set the Camera Name and Time.

1. Click the **Name/Time** button on the Network Camera Setup Page. The next screen appears.

Name / Time

1. Camera Name (1 to 15 Characters)

2. Time Setting

Month Day Year

Please click one of the time setting buttons at first. After that, the other setting items are displayed.

Hour Minute

Caution: Buffered images are erased when this page is saved.

2. Enter the **Camera Name** and **Time setting**.

- To reset the current settings, click **Cancel**.

Then it returns to Setup Page, without saving setting value.

3. When you have finished, click **Save**.

- The setting will be saved.

Instructions for the data fields

| | |
|--------------|-------------------------------------------------------------|
| Name* | This Name can be seen on the camera's image of viewer page. |
|--------------|-------------------------------------------------------------|

| | |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time setting | Please click one of the time setting buttons("AM/PM" or "24H") at first. After that, the other setting items are displayed. Time is used at trigger condition and time stamp of buffered images. |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

Security: Administrator

Security: Administrator screen allows you to set the Administrator security parameters.

- It is possible to setup the Authentication Page and Administrator.
- Click the **Security: Administrator** button on the Network Camera Setup Page screen. The next screen appears.

- Enter each parameter in the proper data field.
 - To reset the current settings, click **Cancel**. Then it returns to Setup Page, without saving setting value.
- When you have finished, click **Save**.
 - The setting will be saved.

Instructions for the data fields

| | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Authentication Enable | <p>It is possible to select the three security levels.</p> <p>None : Since an Authentication Page is not displayed, all users can access all pages.</p> <p>Administrator only: Setup Page for Administrator only.</p> <p>Administrator and General User: Setup Page for administrator and Viewer Page for General User.</p> <p>An administrator can access all pages.</p> |
| Administrator Authentication* | <p>ID : Enter the Administrator's ID</p> <p>Password: Enter the Administrator's Password</p> <p>Retype: Retype same as Password when add or modify the Administrator.</p> |

*: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126).

Security: General User

Security: General User screen allows you to set the General User security parameters.

- It is possible to setup the registration, correction and deletion of General User.

- Click the **Security: General User** button on the Network Camera Setup Page. The next screen appears.

- Enter each parameter in the proper data field.

- To reset the current settings, click **Cancel**.

Then it returns to Setup Page, without saving setting value.

3. When you have finished, click **Save**.

- The setting will be saved.

Instructions for the data fields

| | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General User Authentication | Register the General User up to 20 user IDs. |
| (1) User ID List | <ul style="list-style-type: none"> • List of current registered user. • Please select the desired user when deleting the User ID or modifying the password. |
| Delete | Please select the desired ID from User List, then click the Delete button. |
| Modify | Please select the desired ID from User List, then click the Modify button. Since the Modify screen is displayed, please enter Password and Retype Password to change. |
| (2) New User* | Please enter the ID, Password and retype the password when add the new user. |
| Password* | General User's Password |
| Retype password* | Retype same as above Password. |

*: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126).

Top View Image

Top View Image screen allows you to set the Top View Image setting parameters.

- It is possible to change the Resolution, Quality and refresh Interval when Regularly Refreshed of Top View Image.

1. Click the **Top View Image setting** button on the Network Camera Setup Page screen. The next screen appears.

Top View Image Setting

1. Single Camera

Image Resolution

Image Quality

Refresh Interval when Regularly Refreshed

2. Multi Camera

Image Resolution

Image Quality

Refresh Interval when Regularly Refreshed

2. Select the each parameter.

- To reset the current settings, click .
Then it returns to Setup Page, without saving setting value.

3. When you have finished, click .

- The setting will be saved.

Instructions for the data fields

| | |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Resolution | Select the following Image Resolution item. <ul style="list-style-type: none">• 640 × 480 --- Single Camera only• 320 × 240 (default)• 160 × 120 |
| Image Quality | Select the following Image Quality item. <ul style="list-style-type: none">• Favor clarity: Priority is given to the image quality of the sending image.• Standard: The standard image quality is set. (default)• Favor motion : Priority is given to the motion of the sending image. |
| Refresh Interval when Regularly Refreshed | Please select the desired interval from select box. 10 seconds to 5 minutes will be available. |

Image Transfer

Image Transfer screen allows you to set the Image Transfer parameters.

- It is possible to transfer the images to computer or Server, with mail or FTP function.
- It is possible to set up the various trigger by setting up Timer or External Alarm.

Note

Since the Image Transfer mode uses the cameras internal clock, please make sure the cameras clock setting have been configured. Please refer to Page 46 about Time Setting.

Click the **Image Transfer** button on the Setup Page of Network Camera.

The next screen changes with selected mode. The respectively screens are displayed in Non transfer, Alarm, and Timer mode.

- **Non transfer:** Trigger setting is disabled. Refer to the following Non transfer mode
- **Alarm:** Transfer in the Alarm Mode. Refer to Page 51.
- **Timer:** Transfer in the Timer Mode. Refer to Page 57.

Non transfer mode

- The image will not be transferred.
1. Click the **Image Transfer** button on the Network Camera Setup Page.
The next screen appears.

The screenshot shows the 'Image Transfer' configuration window. It has a title bar 'Image Transfer'. Below it, section '1. Trigger Setting' contains a note: '* Please click one of the trigger setting buttons at first. After that, the other setting items are displayed.' There are three buttons: 'Non Transfer' (highlighted in green), 'Alarm', and 'Timer'. Below these buttons, it says 'Current selection : "Non Transfer"'. Section '2. Capture Control' has two radio buttons: 'Enable' (selected) and 'Disable'. Below the radio buttons is a button labeled 'Clear Buffered images'. At the bottom, a caution message states 'Caution: Buffered images are erased when this page is saved.' with 'Save' and 'Cancel' buttons.

Please select a trigger mode that you want. And if you want to disable the Start Capture of Buffering Image at Single Camera Top View Image page, please check Disable.

2. Select the each parameter.

- To reset the current settings, click **Cancel**.
Then it returns to Setup Page, without saving setting value.
 - To clear the buffered image, click **Clear Buffered images**.
- 3.** When you have finished, click **Save**.
- The setting will be saved.

CAUTION

- When you click the **Clear Buffered images** button, all buffered images are cleared.
- Buffered images are erased by power stop, restart, Update Firmware, Reset to Factory Default.

Transfer in the Alarm Mode

- It is possible to transfer the image using FTP or Mail, when an alarm is generated.
- 1.** Click the Alarm button on the Image Transfer page.
The next screen appears.

Image Transfer

1. Trigger Setting
 * Please click one of the trigger setting buttons at first. After that, the other setting items are displayed.

☐ Non Transfer **(a.)** ☒ Alarm ☐ Timer

Current selection : "Alarm"

(b.) **2. Active Time of Trigger**
 (1) Primary Time
(c.) ☒ Always
☐ Operational between
 Start: [0] hour [0] min [0] sec
 Stop: [23] hour [59] min [59] sec
☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat
 Alarm enable condition [Rising : GND to Open(High),positive edge.]
(d.) (2) Secondary Time ☐ Enable
 * Secondary Time is only active outside of the time period established for Primary Time.
 Alarm enable condition [Rising : GND to Open(High),positive edge.]

(e.) **3. Image Setting**
 (1) Image Resolution [320x240]
 (2) Image Quality [Standard]

(f.) **4. Image Buffer Frequency Setting**
 (1) Pre-alarm Image Buffer ☐ Enable
(g.) Image Frequency
 [1] Images per [hour]
 Maximum number of images per each trigger [1]
 (2) Post-alarm Image Buffer ☒ Enable
 Image Frequency
 [1] Images per [hour]
 Maximum number of images per each trigger [1]

(h.) **5. Transfer Method**
(i.) ☒ Non Transfer
(j.) ☐ FTP
 Server Address or Host Name [_____
 Port No. (Usually Use 21) [21]
 Login ID (0 to 15 Characters) [_____
 Password (0 to 15 Characters) [_____
 Upload File Name [_____
 Over write setting [Over Write to Fixed Upload File Name]

(k.) ☐ Mail
 SMTP Server Address or Host Name [_____
 From (Reply) [_____
 To [_____
 Subject [_____
 Text [_____
 [Clear Buffered images]

6. Notification to be sent when Alarm occurs
(l.) ☒ No Message
☐ Mail
 SMTP Server Address or Host Name [_____
 From (Reply) [_____
 To [_____
 Subject [_____
 Text [_____
 [Clear Buffered images]

Caution: Buffered images are erased when this page is saved.

Save Cancel

Instructions for the data fields

- a.** It is possible to buffer or transfer by alarm trigger. Alarm event is generated by **Digital Input Terminal**. (Please refer to Section 3.1 I/O Connector).
- b.** **Active Time of Trigger** is set up.
- c.** **Always** : Always active the alarm trigger.
Operational between : Operational between start and stop time, please select the desired time.
Alarm enable condition : Please select the [Rising] or [Falling] of digital input terminal edge. When you setup over a day, please check the day of the week on a start day.
- d.** **Secondary time** is only active outside of the time period established for Primary Time. Please check Enable, when you use.
Alarm enable condition : Please select the [Rising] or [Falling] of digital input terminal edge.
- e.** It is possible to select the buffering **Image Resolution and Quality**.
Resolution : 640x480/320x240/160x120
Quality : Favor Clarity/Standard/Favor Motion
- f.** It is possible to select the enable buffer about the Pre and/or Post trigger. Please check Enable, when you select.
- g.** **Image Frequency** : It is target frequency of buffer.
Maximum number of image per each trigger : total image number is determined by memory size, Image Resolution/Quality and target image.
Example : 320x240, Standard = about 80 images.
- h.** It is possible to select **Transfer Method**. Please select only one method.
Non Transfer/FTP/Mail
- i.** Buffering only
It is possible to use the [Primary], [Secondary] on Buffering image viewer.
- j.** **FTP : File Transfer Protocol**
Please setting the following items.
Server Address* or Host Name**, Port No.***, Login ID for access to the FTP server**, Password for access to the FTP server**, Upload File Name at full pass**.
*: Same as the character setting of IP Address.
**: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

***: Numeral characters only (1-65535)

Over write setting

It is possible to select from [Over Write to Fix Upload File Name] or [Add time stamp to Upload File Name].

k. Mail :

Please setting the following items.

Server Address* or Host Name**.

From (Reply)***: Enter the e-mail address of [from]. You can enter here same as [To] when you have just one e-mail address.

To ***: Enter the e-mail address of receiver of e-mail.

Subject & Text ****: Subject and Text of transmitting e-mail.

*: Same as the character setting of IP Address.

**: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

***: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126) and Need the [@] and domain name of e-mail, such as [text] + [@] + [text] + [.] + [text] .

****: Can not use ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 32-126).

Note

The mail function of this camera will only operate correctly with mail servers using SMTP (Simple Mail Transfer Protocol). It cannot be used with Internet accessed mail servers like "Hotmail" or others which are accessed via your browser. In most cases, for security reasons, you must use the mail server of the Internet provider you are connected to while using the camera.

l. It can select the [No Message], [Mail]

Mail: It will be sent the e-mail when Alarm occurs in enable time. Please setting the each items*.

* Same as the Mail character setting of Transfer Method.

2. Select the each parameter.

- To reset the current settings, click **Cancel**.

Then it returns to Setup Page, without saving setting value.

- To clear the buffered image, click **Clear Buffered images**.

3. When you have finished, click **Save**.

- The setting will be saved.

CAUTION

- When you click the **Clear Buffered images** button, all buffered images are cleared.
- Buffered images are erased by power stop, restart, Update Firmware, etc.

Setting Example

Image Transfer

2. Active Time of Trigger

(a.) ☐ Primary Time
☐ Always
☒ Operational between
Start: 9 hour 0 min 0 sec
Stop: 18 hour 0 min 0 sec
☐ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☐ Sat
Alarm enable condition [Rising : GND to Open(High).positive edge.]

(b.) ☐ Secondary Time ☐ Enable
* Secondary Time is only active outside of the time period established for Primary Time.
Alarm enable condition [Rising : GND to Open(High).positive edge.]

3. Image Setting

(c.) (1) Image Resolution 160x120
(2) Image Quality Standard

4. Image Buffer Frequency Setting

(d.) (1) Pre-alarm Image Buffer ☐ Enable
Image Frequency
1 Images per minute
Maximum number of images per each trigger 10
(2) Post-alarm Image Buffer ☒ Enable
Image Frequency
1 Images per sec
Maximum number of images per each trigger 20

5. Transfer Method

(e.) ☐ Non Transfer
☒ FTP
Server Address or Host Name 192.168.0.200
Port No. (Usually Use 21) 21
Login ID (0 to 15 Characters) Panasonic
Password (0 to 15 Characters) *****
Upload File Name KXHC.M10
Over write setting Add time stamp to Upload File Name
☐ Mail
SMTP Server Address or Host Name
From (Reply)
To
Subject
Text

6. Notification to be sent when Alarm occurs

(f.) ☐ No Message
☒ Mail
SMTP Server Address or Host Name xxx.xxx.ne.jp
From (Reply) HCM10@xxx.xxx.ne.jp
To HCM10@xxx.xxx.ne.jp
Subject Mail Transfer
Text Alarm was generated
Clear Buffered images

Caution: Buffered images are erased when this page is saved.

Save Cancel

- a.** It is setup Active time of trigger between 9:00 am to 6:00 PM on Monday to Friday.

When alarm is generated in the setting time, the images are transmitted to server with FTP protocol and is transmitted to specific user by mail. Trigger is generated when door sensor is changed Rising edge(GND to Open High).

- b.** It is inactive time except above setting time.
- c.** The image size to transmit set to 160x120 and the quality set to standard.
- d.** Pre-alarm Image Buffer:
Before the alarm detection, 10 images are buffered by 1 image per minute.
Post-alarm Image Buffer:
After the alarm detection, 20 images are buffered by 1 image per second.
- e.** Setting of FTP server :
IP Address --- 192.168.0.200
Login ID --- Panasonic
Password --- *****
Upload File name --- KXHCM10
File name is added at time stamp mode.
(Example : KXHCM1020010101093000000.jpg)
Underlined numbers mean "AM 9:30.00.000 on January 1, 2001".
- f.** Mail server address --- xxx.xxx.ne.jp
Mail is sent to HCM10@.xxx.xxx.ne.jp from Network Camera.
Subject is [Mail Transfer].
Text of mail is [Alarm was generated].

Transfer in the Timer Mode

- It is possible to transfer the image with Timer.
- 1.** Click the Timer button on the Image Transfer page.
The next screen appears.

Image Transfer

1. Trigger Setting
 * Please click one of the trigger setting buttons at first. After that, the other setting items are displayed.

Current selection : "Timer"

(b.) 2. Active Time of Trigger
 (1) Primary Time
(c.) ☒ Always
☐ Operational between
 Start: hour min sec
 Stop: hour min sec
☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat
(d.) (2) Secondary Time ☐ Enable
 * Secondary Time is only active outside of the time period established for Primary Time.

(e.) 3. Image Setting
 (1) Image Resolution
 (2) Image Quality

(f.) 4. Image Buffer Frequency Setting
 (1) Primary Image Buffer Frequency
 Images per
 (2) Secondary Image Buffer Frequency
 Images per

(g.) 5. Transfer Method
(h.) ☐ Non Transfer
(i.) ☒ FTP
 Server Address or Host Name
 Port No. (Usually Use 21)
 Login ID (0 to 15 Characters)
 Password (0 to 15 Characters)
 Upload File Name
 Over write setting

(j.) ☐ Mail
 SMTP Server Address or Host Name
 From (Reply)
 To
 Subject
 Text

Caution: Buffered images are erased when this page is saved.

a. It is possible to buffer or transfer by time trigger only.

b. Active Time of Trigger is set up.

c. Always : Always active.

Operational between : Operational between start to stop time, please select the desired time.

- d. Secondary Time** is only active outside of the time period established for Primary Time. Please check Enable, when you use.
- e.** It can select the Buffering **Image Resolution and Quality**. Same as Image setting of [Alarm].
- f.** The Image buffer of Primary and Secondary can be set up. Same as Image setting of [Trigger setting Alarm].
- g.** You can select **Transfer Method**. Please select only one method.
- h.** Non Transfer (Buffer only)
It is possible to use the [Primary], [Secondary] on Buffering image viewer.
- i. FTP : File Transfer Protocol**
Please set the following items.
Server Address* or Host Name**, Port No.***, Login ID for access to the FTP server**, Password for access to the FTP server**, Upload File Name at full pass**.
*: Same as the character setting of IP Address.
**: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)
***: Numeral characters only (1-65535)
Over write setting
It is possible to select from [Over Write to Fix Upload File Name] or [Add time stamp to Upload File Name].
- j. Mail :**
Please setting the following items.
Server Address* or Host Name**.
From (Reply)***: Enter the e-mail address of [from]. You can enter here same as [To] when you have just one e-mail address.
To ***: Enter the e-mail address of receiver of e-mail.
Subject & Text ****: Subject and Text of transmitting e-mail.
*: Same as the character setting of IP Address.
**: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)
***: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126) and need the [@] and domain name of e-mail, such as [text] + [@] + [text] + [.] + [text] .
****: Can not use ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 32-126).

2. Select the each parameter.

- To reset the current settings, click Cancel.

Then it returns to Setup Page, without saving setting value.

- To clear the buffered image, click **Clear Buffered images**.

3. When you have finished, click **Save**.

- The setting will be saved.

CAUTION

- When you click the **Clear Buffered images** button, all buffered images are cleared.
- Buffered images are erased by power stop, restart, Update Firmware and etc.
- The interval time in Image buffering may not satisfy the contents of a setting according to conditions of operation. On the conditions to which especially two or more clients were connected, the buffering interval times become long.
- The number of images in image buffering may differ from setting number of sheets. It is restricted in a memory and image size and changes with the resolution, the quality of image, and subjects of a image.
On condition that 320×240 and Standard, it is about 80 images.

If the Alarm or Timer Event Trigger is not generated.

- 1.** Make sure the setting items of Trigger has been correctly entered.
- 2.** Please check whether external alarm apparatus is connected correctly.
*Please refer to Section 3.1 I/O Connector.

Camera Setup

Camera Setup screen allows you to set the Camera setup parameters.

- It is possible to set the white balance mode and Power Line Frequency (for Fluorescent light).
 - It is possible to lock the Pan & Tilt (including Pan Scan)/Brightness Control.
- 1.** Click the **Camera Setup** button on the Network Camera Setup Page.
The next screen appears.

Camera Setup

1. White Balance Auto

2. Power Line Frequency (for Fluorescent light)
☒ 60Hz ☐ 50Hz

3. Brightness Control
☒ Enable ☐ Disable

4. Pan / Tilt Control
☒ Enable ☐ Disable

Save Cancel

2. Select the each parameter in the proper data field.

- To reset the current settings, click Cancel.
Then it returns to Setup Page, without saving setting value.

3. When you have finished, click Save.

- The setting will be saved.

Instructions for the data fields

| | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| White Balance | <p>You can select the following items.</p> <ul style="list-style-type: none"> Auto (default) --- Auto White Balance Fixed Indoor --- (Color Temperature : 2800K, Electric Bulb) Fixed Fluorescent_1 --- (Color Temperature : 3600K, Natural fluorescent light) Fixed Fluorescent_2 --- (Color Temperature : 4000K, Cool fluorescent light) Fixed Outdoor --- (Color Temperature : 6000K, Solar light) Hold --- Hold the current White Balance |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Line Frequency | <p>It can select the Flicker Correction by power supply frequency.</p> <ul style="list-style-type: none"> • 60Hz (default) • 50Hz <p>Please select 60Hz in US.</p> |
| Pan/Tilt Control Brightness Control | <p>You can lock the Pan & Tilt (including Pan Scan)/Brightness Control.</p> <p>Please select enable or disable.</p> <p>If you select disable, it is displayed Locked on control bar when you click these buttons.</p> |

Multi-Camera

Multi-Camera screen allows you to set the Multi-Camera parameters.

- It is possible to set the IP Address and Camera Name of Multi-Camera.
- When using Multi-Camera, setup is required.

1. Click the **Multi-Camera** button on the Network Camera Setup Page.
The next screen appears.

Multi-Camera

Registration / Modification

1. 2nd Network Camera ☐ Enable
 IP Address or Host Name
 Camera Name (1 to 15 Characters)

2. 3rd Network Camera ☐ Enable
 IP Address or Host Name
 Camera Name (1 to 15 Characters)

3. 4th Network Camera ☐ Enable
 IP Address or Host Name
 Camera Name (1 to 15 Characters)

2. Select the each parameter in the proper data field.
 - To reset the current settings, click **Cancel**.
Then it returns to Setup Page, without saving setting value.
3. When you have finished, click **Save**.
 - The setting will be saved.

Note

Please do not overlap the IP Address setting.

Instructions for the data fields

| | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enable | <ul style="list-style-type: none"> • Please check this box when seeing the desired Network Camera. • The desired Network camera need to see its image on Multi-Camera mode. |
| IP Address (or URL)* or Host Name*** | Enter the desired Network Camera's IP Address or Host Name. |
| Camera Name** | <ul style="list-style-type: none"> • Enter the desired camera's Name. <p>It is used only for the display of Multi-Camera.</p> |

*: Must be composed of four numeral characters (0 to 255) and delimited with 3 dots, such as 192.168.0.253. (Can not use "0.0.0.0" and "255.255.255.255")

**: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>], [:] (only ASCII character codes 33-126)

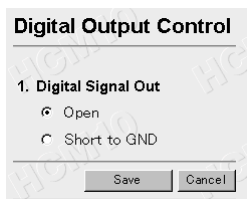
***: Can not use [Space], ["], ['], [#], [&], [%], [=], [+], [?], [<], [>] (only ASCII character codes 33-126)

Digital Output Control

Digital Output Control screen allows you to set digital output control parameters.

- It is possible to set the digital output of I/O Connector.

1. Click the **Digital Output Control** button on the Network Camera Setup Page screen. The next screen appears.



2. When you select the **Open** button, Digital output terminal becomes high impedance (open collector).

When you click the **Short to GND** button, Digital output terminal becomes low (0V).

3. When you have finished , click **Save**.
The setting will be saved.

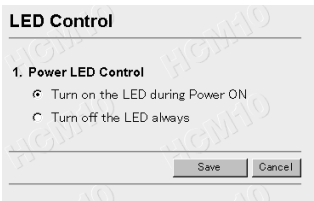
Information

- It is shown in Section 3.1 I/O Connector.

LED Control

LED Control screen allows you to set the LED Control parameters.

- It is possible to set LED ON or OFF.
1. Click the **LED Control** button on the Setup Page of Network Camera.
The next screen appears.

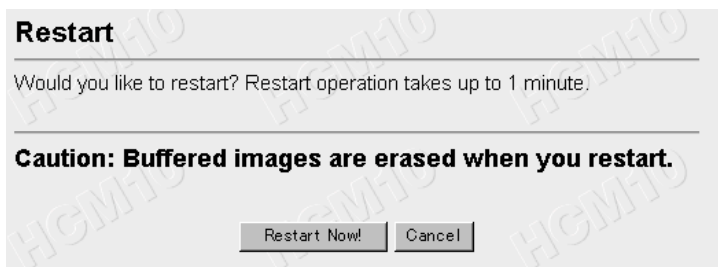


2. Select the LED Control parameter.
 - To reset the current settings, click **Cancel**.
Then it returns to Setup Page, without saving setting value.
3. When you have finished , click **Save**.
 - The setting will be saved.

Restart

Restart screen allows you to set restart.

- It is possible to restart the Network Camera. Restart is as same as returning on power supply.
1. Click the **Restart** button on the Network Camera Setup Page.
The next screen appears.



2. When you need to restart, click the **Restart Now !** button.
3. To undo the restart, click **Cancel**.

Then it returns to Setup Page, without Restart.

Note

The Restart operation may take as long as 1 minute.
When the camera is restarted all buffered images will be erased.

CAUTION

Buffered images are erased when you execute the restart.

Update Firmware

Update Firmware screen allows you to update Firmware.

- It is possible to upgrade the Firmware Version.

Before beginning Update Firmware, it is necessary to get the proper firmware from Panasonic Support Website (<http://www.kmelink.net/ipproducts/us/download/index.html>) and please store to your computer's Hard Disk or Floppy Disk.

Note

When you use the DHCP function, please change your Internet Connection from DHCP to Static in Network Page.

1. Click the **Update Firmware** button on the Network Camera Setup Page screen. The next screen appears.

Update Firmware

With power applied to the camera, click on "Update Firmware" below. Depending on the speed of your system, the procedure can take up to 1 minute.

Caution:

- (1) **Disconnect the camera from the network during the update firmware process.**
- (2) **Buffered images are erased when you execute this page.**
- (3) **Never turn off the power during the update firmware process.**

2. When you need to restart, Click **Update Firmware** button.

Restarting message appears.

Restarting now...

Restart operation takes up to 1 minute.

Please enter the proper IP address to URL, when no response, automatically.

Please wait up to 1 minute and then the screen below appears.

Update Firmware

Please enter or browse the firmware file name for update.

File name

The update firmware process takes about 90 seconds via "File Upload", "Flash-ROM Writing", and "Restart", automatically.

Caution : Never turn off the power, during the update firmware process.

3. Click **Browse...** to select the software from the file selector.
 - The Choosing file dialogue box appears.
4. Enter a desired Firmware file (including the path information) to the "File name" box and click "open" button.
5. The selected filename appears in the Filename field of the Update Firmware dialogue box. If you already know the new software file name, you can type it into the filename field directory.
6. Make sure the new software file name is selected exactly, and click **Update Firmware** button.
 - To undo the upgrade, click **Cancel**.

Then it returns to Setup Page, without updating the firmware.

7. Next message is displayed between Update Firmware.

Proceeding the update firmware

Now Flash-ROM Writing...
Please wait about 80 seconds.

Caution : Never turn off the power, during the update firmware process.

Update Firmware operation takes about 80 seconds.

And next, the screen of Restart is displayed and a Network Camera begins Restart automatically.

Restarting now...

Restart operation takes up to 1 minute.

Please enter the proper IP address to URL, when no response, automatically.

Restart operation takes up to 1 minute.

Then Top Page is displayed.

CAUTION

- Disconnect to global network during Update Firmware.
- Never turn off the Camera power, during the Update Firmware.
- Buffered images are erased when you execute the Update Firmware.

Information

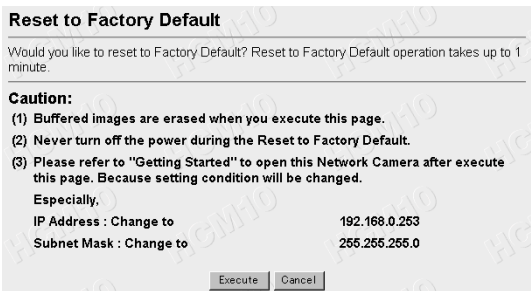
Please check the current Update Firmware on the Setup page.

Reset to Factory Default

Reset to Factory Default screen allows you to reset to Factory Default.

- It is possible to reset the parameter of Network Camera to Factory Default.

1. Click the **Reset to Factory Default** button on the Network Camera Setup Page. The next screen appears.



- When you need to reset to Factory Default, click the **Execute** button.

The Reset to Factory Default button allows you to initialize all the parameters of the Network Camera to the factory default, including the ID, Password, IP Address and Subnet Mask.

- To undo the reset click **Cancel**.

Then it returns to Setup Page, without reset to Factory Default.

Information

- Please refer to Section 3.2 Reset the Camera to the Factory Default settings.
- You can also operate the "Reset to Factory Default" by pushing the "CLEAR SETTING button" a few seconds, located on the side panel. Please refer to Section 3.2 about the "CLEAR SETTING button"

CAUTION

- Buffered images are erased when you execute this page.
- Never turn off the power, during the Reset to Factory Default.
- Please refer to "Getting Started Manual" to open this Network Camera, after execute this page. Because setting condition will be changed. Especially,
 IP Address : Changed to 192.168.0.253
 Subnet Mask : Changed to 255.255.255.0

Section 3

Useful Information

3.1 I/O Connector

By attaching external devices, such as a sensor, in I/O connector, images can be transmitted at the time of alarm generating.

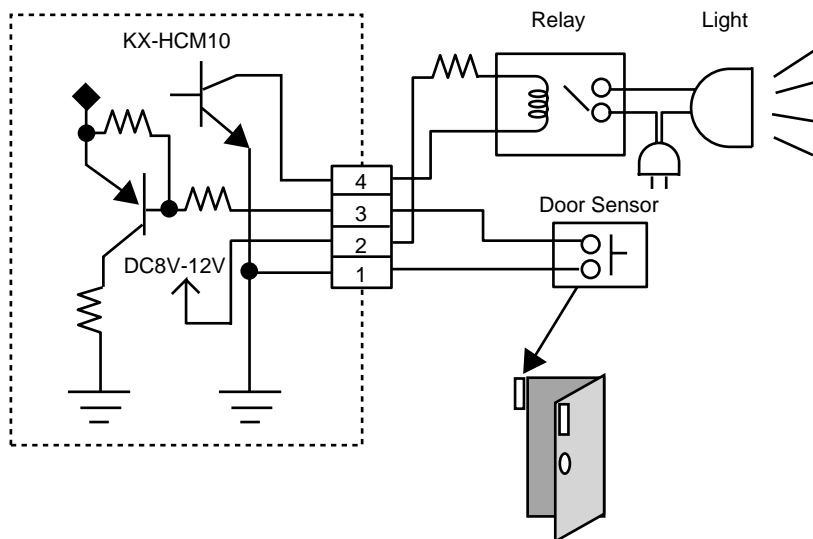
Explanation of I/O Connector

| Pin | Function |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | GND |
| 2 | DC Power Output <ul style="list-style-type: none">• DC8V - 12V• Maximum of 50mA load drive is possible. |
| 3 | Digital Input <ul style="list-style-type: none">• Please use it by opening or GND short-circuit. |
| 4 | Digital Output <ul style="list-style-type: none">• It is controllable by administrator setup. Please refer to Page 63.• It is an open collector circuit and the maximum drawing-in current is 50mA. Maximum voltage is DC+15V. |

CAUTION

- Please keep the electric specification of each terminal as above contents, and use it.
- If the current or voltage parameters mentioned above are exceeded, the camera will sustain permanent damage.
- Do not connect the DC Power (pin 2) to GND (pin 1). This will short circuit the camera's power supply and possibly damage the camera.

Circuit Diagram Example

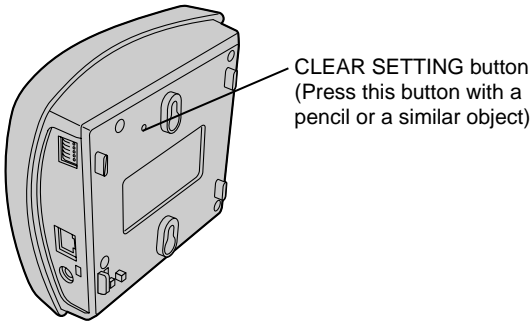


CAUTION

The above circuit involves low voltage/low current circuits as well as high voltage/high current circuits. It is dangerous to wire this yourself. Please ask a qualified electrician to do the wiring for you. He will understand what type of wires, switches, and relays to use. If wired incorrectly, the Network Camera could be damaged or you could receive a fatal electric shock.

3.2 Reset the Camera to the Factory Default settings

The Network Camera has an CLEAR SETTING button which is located on back panel.



To Reset the Camera to the Factory Default Settings

If any of the user settings or password were forgotten the Network Camera can be easily reset to the factory default settings. With power applied, press the "CLEAR SETTING" for about 1 second. The green LED on the front of the camera will first go out, and will blink for about 45 seconds during which time the pan - tilt motors will reposition themselves. The entire procedure takes about 1 minute. The reset is located on the rear of the camera and is accessed through the hole in the case using a pointed object.

CAUTION

When you press the **CLEAR SETTING** button, all buffered images are cleared.

3.3 The initial value of a factory and notes of a setting item

| No | Network | Items | Factory Default value | Indispensable setting | Note |
|----|--------------------------------------|-------------------------------------------|-----------------------|----------------------------------|--------------------------------------|
| 1 | | 1.Getting Started Configuration | check | - | - |
| | | 2.Internet Connection | - | - | - |
| | | Port No. | 80 | - | (*8) |
| | | Static : IP Address | 192.168.0.253 | (*)1 | (*)4 |
| | | Static : Sub Net Mask | 255.255.255.0 | (*)1 | (*)4 |
| | | DHCP : Host Name | [Blank] | (*)3 | (*)6) 0 to 63 Characters |
| 2 | | 3.Default Gate Way | [Blank] | (*)2) when you use Gateway | (*)4 |
| | | 4. DNS Server1 & DNS server 2 | [Blank] | (*)2) when you use DNS | (*)4 |
| | | 5.DDNS | No check | - | - |
| | | Your E-Mail Address | [Blank] | (*)2) when you use DDNS | (*)7) 1 to 63 Characters |
| | | 6.MAX Bandwidth usage (Mbps) | Unlimited | - | 0,1,0,2,0,3,0,5,1,0.Unlimited |
| | | Host Name | KX-HCM10 | - | (*)6) 1 to 15 Characters |
| 3 | Name/Time | Time Setting (AM/PM, 24H) | AM/PM | - | - |
| | | Time Setting (Year/Month/Day/Hour/Minute) | No changing | - | - |
| | | Authentication Enable | No check | - | - |
| | | ID | [Blank] | (*)2) when you set Administrator | (*)6) 4 to 15 Characters |
| | | Password | [Blank] | (*)2) when you set Administrator | (*)6) 4 to 15 Characters |
| | | Retype Password | [Blank] | (*)2) when you set Administrator | (*)6) 4 to 15 Characters |
| 4 | Security: General User 4-2:New User: | General User Authentication | No entry | - | - |
| | | New User: ID | [Blank] | (*)2) when you set user | (*)6) 4 to 15 Characters |
| | | New User: Password | [Blank] | (*)2) when you set user | (*)6) 4 to 15 Characters |
| | | New User: Retype Password | [Blank] | (*)2) when you set user | (*)6) 4 to 15 Characters |
| 5 | Top View Image | 1.Top View Image Setting | - | - | - |
| | | (1) Single Camera | - | - | - |
| | | Image Resolution | 320x240 | - | 160x120,320x240,640x480 |
| | | Image Quality | Standard | - | Favor clarity,Standard, Favor motion |

| No | Items | Factory Default value | Indispensable setting | Note |
|----|------------------------------------------|-----------------------|-----------------------|------------------------------------------------------------|
| 5 | Top View Image Setting | | | |
| | Refresh Interval | 30 | - | 10,15,20,25,30,45 , 1,2,3.5 min |
| | (2) Multi-Camera Image Resolution | 320x240 | - | - |
| | Image Quality | Standard | - | 160x120,320x240 Favor clarity,Standard, Favor motion |
| | Refresh Interval | 30 | - | 10,15,20,25,30,45 , 1,2,3.5 min |
| 6 | Image Transfer | | | |
| | 6-2Non transfer | | | |
| | 1.Trigger Setting | Non transfer | - | - |
| | 2. Capture Control | Enable | - | (No setting) |
| | 6-3:Alarm | | | |
| | 1.Trigger Setting | - | - | - |
| | 2.Active time of trigger | - | - | - |
| | (1) Primary Time | - | - | - |
| | Always/Operational between | Always | - | - |
| | Restricted between Start | 00:00:00 | - | - |
| | Restricted between Stop | 23:59:59 | - | - |
| | Day-of-the-week specification | all check | - | - |
| | Alarm enable condition, | Rising | - | - |
| | (2)Secondary Time | No check | - | - |
| | Alarm enable condition, | Rising | - | - |
| | 3. Image Setting | | | |
| | (1) Image Resolution | 320x240 | - | 160x120,320x240,640x480 |
| | (2) Image Quality | Standard | - | Favor clarity,Standard, Favor motion |
| | 4. Image Buffer Frequency Setting | | | |
| | (1)Pre-alarm Image Buffer | - | - | - |
| | Image Frequency | No check | - | - |
| | Maximum number of image per each trigger | 1 Image/Hour | - | - |
| | | 1 | - | - |

| No | Items | Factory Default value | Indispensable setting | Note |
|----|----------------------------------------------|--------------------------------------|------------------------|----------------------------------|
| 6 | 6-3:Alarm | | | |
| | (2) Post-alarm Image Buffer | Check | - | - |
| | Image Frequency | 1 Image/Hour | - | - |
| | Maximum number of image per each trigger | 1 | - | - |
| | 5. Transfer Method | - | - | - |
| | NonTransfer | select | - | - |
| | FTP | un-select | - | - |
| | Server Address or Host Name | [Blank] | (*2) when you use FTP | (*4) or (*6) 1 to 255 Characters |
| | Port No. (Usually Use 21) | 21 | (*2) when you use FTP | (*8) |
| | Login ID | [Blank] | (*3) | (*6) 0 to 15 Characters |
| | Password | [Blank] | (*3) | (*6) 0 to 15 Characters, |
| | Upload File Name | [Blank] | (*2) when you use FTP | (*6) 1 to 234 Characters |
| | Over write setting | Over write to fixed upload file name | - | - |
| | Mail | un-select | - | - |
| | SMTP Server Address or Host Name | [Blank] | (*2) when you use Mail | (*4) or (*6) 1 to 255 Characters |
| | From (Reply) | [Blank] | (*2) when you use Mail | (*7) 1 to 63 Characters |
| | To | [Blank] | (*2) when you use Mail | (*7) 1 to 63 Characters |
| | Subject | [Blank] | (*3) | (*5) 0 to 44 Characters |
| | Text | [Blank] | (*3) | (*5) 0 to 63 Characters |
| | 6. Notification to be sent when Alarm occurs | - | - | - |
| | No Message | Select | - | - |
| | Mail | Un-select | - | - |
| | SMTP Server Address or Host Name | [Blank] | (*2) when you use Mail | (*4) or (*6) 1 to 255 Characters |
| | From (Reply) | [Blank] | (*2) when you use Mail | (*7) 1 to 63 Characters |
| | To | [Blank] | (*2) when you use Mail | (*7) 1 to 63 Characters |

| No | Items | Factory Default value | Indispensable setting | Note |
|----|--------------------------------------|-----------------------|------------------------|------------------------------------------|
| 6 | 6-3:Alarm | [Blank] | (*)3 | (*)5) 0 to 63 Characters |
| | Text | [Blank] | (*)3 | (*)5) 0 to 63 Characters |
| | 6-4:Timer | - | - | - |
| | (3) Timer | - | - | - |
| | 1. Trigger Setting | - | - | - |
| | 2. Active time of trigger | - | - | - |
| | (1) Primary Time | - | - | - |
| | Always/Operational between | Always | - | - |
| | Restricted between Start | 00:00:00 | - | - |
| | Restricted between Stop | 23:59:59 | - | - |
| | Day-of-the-week specification | all check | - | - |
| | (2) Secondary Time | No check | - | - |
| | 3. Image Setting | - | - | - |
| | (1) Image Resolution | 320x240 | - | 160x120, 320x240, 640x480 |
| | (2) Image Quality | Standard | - | Favor clarity, Standard, Favor motion |
| | 4. Image Buffer Frequency Setting | - | - | - |
| 6 | (1) Primary Image Buffer Frequency | 1 Image/Hour | - | - |
| | (2) Secondary Image Buffer Frequency | 1 Image/Hour | - | - |
| | 5. Transfer Method | - | - | - |
| | Non Transfer | Select | - | - |
| | FTP | un-select | - | - |
| | Server Address or Host Name | [Blank] | (*)2) when you use FTP | (*)4) or (*)6) 1 to 255 Characters |
| | Port No. (Usually Use 21) | 21 | (*)2) when you use FTP | (*)8) |
| | Login ID | [Blank] | (*)3 | (*)6) 0 to 15 Characters |
| | Password | [Blank] | (*)3 | (*)6) 0 to 15 Characters. |
| | Upload File Name | [Blank] | (*)2) when you use FTP | (*)6) 1 to 234 Characters |

| No | Items | Factory Default value | Indispensable setting | Note |
|----|----------------------------------|--------------------------------------|----------------------------------|-----------------------------------------------------------------------------|
| 6 | 6-4: Timer | Over write to fixed upload file name | - | - |
| | Mail | Un-select | - | - |
| | SMTP Server Address or Host Name | [Blank] | (*) when you use Mail | (*) or (*) 1 to 255 Characters |
| | From (Reply) | [Blank] | (*) when you use Mail | (*) 1 to 63 Characters |
| | To | [Blank] | (*) when you use Mail | (*) 1 to 63 Characters |
| | Subject | [Blank] | (*) | (*) 0 to 44 Characters |
| 7 | Text | [Blank] | (*) | (*) 0 to 63 Characters |
| | 1. White Balance | Auto | - | Auto, Fixed (Indoor/Fluorescent, 1/Fluorescent, 2/Outdoor), Hold 60Hz, 50Hz |
| | 2. Power Line Frequency | 60Hz | - | - |
| | 3. Pan/Tilt Control | Enable | - | - |
| 8 | 4. Brightness Control | Enable | - | - |
| | 1. 2nd Network Camera | No check | - | - |
| | IP Address or Host Name | [Blank] | (*) when you use Multi-Camera | (*) 4 or (*) 9 |
| | Camera Name | [Blank] | (*) when you use Multi-Camera | (*) 1 to 15 Characters |
| | 2. 3rd Network Camera | No check | - | - |
| | IP Address or Host Name | [Blank] | (*) when you use Multi-Camera | (*) 4 or (*) 9 |
| 9 | Camera Name | [Blank] | (*) when you use Multi-Camera | (*) 1 to 15 Characters |
| | 3. 4th Network Camera | No check | - | - |
| | IP Address or Host Name | [Blank] | (*) when you use Multi-Camera | (*) 4 or (*) 9 |
| | Camera Name | [Blank] | (*) when you use Multi-Camera | (*) 1 to 15 Characters |
| | Open/Short to GND | Open | - | - |
| | Turn on the LED during Power ON | Select | - | - |
| 10 | LED Control | Turn off the LED always | - | - |
| 11 | Update Firmware | File Name | (*) when you use Update Firmware | - |

(*) : Required item

(*) : Registration is required when using each item.

(*) : Registration is not indispensable.

(*) : Must be composed of four numerical characters (0 to 255) and delimited with 3 dots, such as 192.168.0.253. (Can not use "0.0.0.0" and "255.255.255.255")

(*) : Can not use [], [], [#], [&], [%], [=], [+], [?], [<], [>], [] (only ASCII character code 32-126)

(*) : Can not use [Space], [], [#], [&], [%], [=], [+], [?], [<], [>], [] (only ASCII character code 33-126)

(*) : Can not use [Space], [], [#], [&], [%], [=], [+], [?], [<], [>], [] (only ASCII character code 33-126) and Need the [@] and domain name of e-mail, such as [text]

+ [@] + [text] + [] + [text]

(*) : 1 - 65535

(*) : Can not use [Space], [], [#], [&], [%], [=], [+], [?], [<], [>], [] (only ASCII character code 33-126)

Section 4

Appendix

4.1 Specification

Camera Specification

| Item | Description |
|----------------------|------------------------------------------|
| Pan & Tilt Angle | Pan : - 60° to + 60°, Tilt : 0° to - 45° |
| Sensor Type | 1/3 inch CMOS |
| Number of Pixels | 320,000 pixels (Effective Pixels) |
| Illumination | 10 - 10,000 lux |
| White Balance | Auto/Manual/Hold |
| Adjustment | Brightness, White balance |
| Focus | Fixed 1m - infinity |
| Caliber Ratio(F No.) | F1.8 |
| Horizontal Angle | 45 ° |
| Exposure | Auto |

Other Specification

| Item | Description |
|---------------------|-----------------------------------------------------------------------------------------------------------|
| Video Compression | JPEG/3 Levels |
| Video Resolution | 640 × 480, 320 × 240(default), 160 × 120 |
| Image Buffer | About 80 frames (320 × 240) with time display |
| Magnification | 100% or 150% |
| Frame rate(*1) | Max 7.5 frames/second (640 × 480) Max 15 frames/second (320 × 240) Max 15 frames/second (160 × 120) |
| Supported Protocols | TCP, UDP, IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS |
| Message Operation | Notice of alarm outbreak |
| Message Method | SMTP |

| Item | Description |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trigger | Time : Date of the Week/Hour/Minute/Second Alarm-event : Sensor Input (It is possible to set the period between current and next image.(min. 0.1 second)) |
| Interface | 10 Base-T Ethernet RJ-45 connector × 1 |
| Sensor I/O Connector (*2) | Input : Digital Input × 1 Output : Digital Output × 1 |
| LED Display | Power Link and Activity for network port |
| Dimension(HWD) | 4.57" (116 mm) × 4.57" (115 mm) × 2.83" (72 mm) |
| Weight | 0.77 lb (350 g) (not including Stand) |
| Power | AC adaptor : Input 120 VAC Output 9 VDC Consumption : 8 W |
| Environmental | Operation temperature : +41 °F to +104 °F (+5 °C to +40 °C) Indoor use only Storage temperature : +32 °F to +122 °F (0 °C to +50 °C) Humidity : 20 % to 80 % (No Condensation) |

*1) Frame rate changes with the environment of a network and the performance of computer.

*2) A sensor must be attached to the Network Camera in order to perform alarm function.

4.2 Troubleshooting

| Problem | Cause and Remedy |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| While setting with CD-ROM, could not succeed with Network configuration setting. | <ol style="list-style-type: none">1. Please power supply is returned on.2. Please do not use to over the Router. |
| The Network Camera Web screen does not appear. | <ol style="list-style-type: none">1. When you change the IP address of Network Camera, enter the new IP address in the URL of the browser.2. Make sure the Ethernet indicator is on. Make sure the Hub indicator and the LAN card indicator is on. If any indicator is off, check the network connections.3. According to the status of the network, the web screen does not appear quickly. Wait for a second.4. When Network Camera is accessed via a proxy, please setup not to use a proxy. For details, please refer to Section 1.5.2 Setup the Computer. If web screen does not appear when you are doing above contents, please press the CLEAR SETTING button and setup again. |

| Problem | Cause and Remedy |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The Network Camera Image screen does not appear.</p> | <ol style="list-style-type: none"> 1. When Internet Explorer is used for a web browser, it is necessary to download ActiveX program. Please set Security Level of Internet Explorer as Low temporarily (Tools menu → Internet Options → Security tab → Custom level) and access it again. (Since ActiveX program is saved in computer if it reads once, you can return Security Level to previous setting after you can check a display of an image.) 2. When you change the IP address of Network Camera, enter the new IP address in the URL of the browser. 3. The Panasonic KX-HCM10 IP Camera can provide a motion JPEG image to a maximum of 10 simultaneous network connections. If an 11th user tries to connect, a blue screen is displayed. (A viewer image of buffering image is also the simultaneous connection up to ten sets.) 4. According to the status of the network, the web screen does not appear quickly. Wait for a second. <ul style="list-style-type: none"> • When Network Camera is accessed via a proxy, please setup not to use a proxy. For details, please refer to Section 1.5.2 Setup the Computer. 5. Proper operation of the camera requires that "Active X" is installed and operating properly. Today, most browsers include this application. Verify if it is installed and operating correctly. If no, please install Active X by the following method. <ul style="list-style-type: none"> • Double-click the "ocx\Regghcm10.exe" in CD-ROM and a dialogue box is displayed. • Click the "Register OCX (Active X)" button. • Please wait for a while until the dialogue box of "Succeeded!" appeared. |
| <p>You do not remember the IP address of the Network Camera.</p> | <ul style="list-style-type: none"> • Please check an IP address using attached CD-ROM. |

| Problem | Cause and Remedy | |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| You do not remember the password to use the Network Camera administration web screen. | <ul style="list-style-type: none"> Reset the Network Camera by pressing the CLEAR SETTING button. <p>The CLEAR SETTING button allows you to initialize all the parameters of the Network Camera to the factory presets. Then, reconfigure the Network Camera.</p> | |
| The Ethernet network does not work and the Ethernet indicator on the Network Camera is off. | <ul style="list-style-type: none"> The Ethernet Cable does not match. <p>Please check the following contents.</p> | |
| | Ethernet Cable | Device |
| | Straight Cable | Network Camera \longleftrightarrow Hub \longleftrightarrow PC |
| | Category 5 Cross Cable | Network Camera \longleftrightarrow PC |
| Pan & Tilt does not move. | <ul style="list-style-type: none"> It is assumed that communication of Network Camera and computer is stopped. Please check that the updating button of a web browser is pushed and the image has been updated, and operate the Pan & Tilt function. A certain external load may be applied to the Pan & Tilt operation part. Please check the condition of Network Camera. | |
| Image is out of focus. | <ul style="list-style-type: none"> The lens is dirty or dust is attached. Please clean with a lens cleaner. | |
| The color of image is not good. | <ul style="list-style-type: none"> Please change a white balance setup by camera setting of Setup Page. Please check whether the color of the monitor of a personal computer is 16 bits or more. | |
| Image is noisy. | <ul style="list-style-type: none"> If a subject is dark, it will become easy to come to image out of a noise. Please make use environment bright. | |
| Power LED does not light up | <ul style="list-style-type: none"> Please check whether standard AC adaptor(PQLV10Y) is used. Please check LED control of an administrator setup. | |

| Problem | Cause and Remedy |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power LED continues blinking after turn on the Network Camera. | <p>Please check whether you can access the camera with your browser.</p> <ul style="list-style-type: none"> • If you can access the camera and the screen is Update Firmware page, you should do Update Firmware procedure. • If you can not access the camera, the KX-HCM10 hardware is defective. Please call our customer call center. |
| Renewal of an image is slow. | <ul style="list-style-type: none"> • The number of the renewal frames of an image of a camera changes from the following contents. <ul style="list-style-type: none"> • Setting : View mode/Image Resolution/Image Quality/Network Bandwidth usage • Use environment : the personal computer performance currently used, Network environment, subject conditions (Brightness, subject, etc.) • Renewal of an image becomes slow by two or more users' simultaneous access. <p>For this reason, the performance indicated to Specification may not come out according to the above conditions.</p> <ul style="list-style-type: none"> • On Multi-Camera, when renewal of an image is slow, please use Ethernet Switching Hub. (If Ethernet Switching Hub is not used, the renewal of an image of each screen may become slow.) |

| Problem | Cause and Remedy |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Update Firmware is not carry out a normal end. | <p>When it becomes impossible to access a camera by the reason of power supply OFF, network troubles, and others at the time of Update Firmware, it connects in the following procedure.</p> <pre>graph TD A[The power supply of a camera and Computer is re-switched on.] --> B[The IP address when the ability to have accessed normally is specified to be URL of a browser, and access is tried to a camera.] B --> C{Can you access the camera?} C -- Yes --> H[Update Firmware is completed.] C -- No --> D[The CLEAR SETTING button of a camera is pushed. Then, reconfigure the Network Camera with Network Configuration software in CD-ROM. And access again.] D --> E{Is the screen displayed Top Page?} E -- No --> F[It is the same as that of usual Update Firmware. Please perform Update Firmware according to Page 65.] E -- Yes --> G[Please check the Setup Page version No.] G --> I{Is the Version wished number?} I -- Yes --> H I -- No --> F F --> H</pre> <p>Network Camera KX-HCM10 Ver. * * *</p> |
| If you cannot solve your problem | <ul style="list-style-type: none">• Call our customer call center at 1-800-272-7033• After the limited warranty, call our Continued Services Technical Support Line at 1-900-555-PANA(1-900-555-7262) |

4.3 Important Safety Instruction

When using this unit, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or personal injury.

- a) Read and understand all instructions.
- b) Unplug this unit from AC outlets before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- c) Do not use this unit near water, for example, near a bathtub, washbowl, kitchen sink, or the like.
- d) Place this unit securely. Serious damage and/or injury may result if the unit falls.
- e) Use proper power source. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- f) Do not place objects on the power cord. Install the unit where no one can step or trip on the cord.
- g) Unplug this unit from the wall outlet and refer servicing to an authorized servicenter when the following conditions occur:
 - 1) When the power supply cord or plug is damaged or frayed.
 - 2) If liquid has been spilled into the unit.
 - 3) If the unit has been exposed to rain or water.
 - 4) If the unit does not work normally by following the operating instructions. Adjust only controls covered by the operating instructions. Improper adjustment may require extensive work by an authorized servicenter.
 - 5) If the unit has been dropped or physically damaged.
 - 6) If the unit exhibits a distinct change in performance.

SAVE THESE INSTRUCTIONS

WARNING

- TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR ANY TYPE OF MOISTURE.

4.4 FCC and Other Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- **Environment:** do not place the unit in a room where the temperature is less than 41°F (5°C) or greater than 104°F (40°C). Allow 4" (10 cm) clearance around the unit for proper ventilation. Avoid excessive smoke, dust, mechanical vibration, shock, or direct sunlight.
- **Routine care:** wipe the unit with a soft cloth. Do not use benzine, thinner, or any abrasive powder. When you leave the unit unused for a long period of time, unplug the AC adaptor from the outlet.
- **If there is any trouble:** consult an authorized Panasonic Factory Service Center.

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

No responsibility will be taken by our company with respect to consequences resulting from the use and/or the damage of the KX-HCM10 Network Camera.

Section 5

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For product service

- Panasonic Servicenters are listed in the servicenter directory.
- Call 1-800-272-7033 for the location of an authorized servicenter.
- After the limited warranty, please contact our Continued Services Technical Support Line at 1-900-555-PANA (1-900-555-7262). If you have difficulty reaching this number, it may be blocked by your phone company. Please contact your local phone company to correct this.

When you ship the product

- Carefully pack your unit, preferably in the original carton.
- Attach a letter, detailing the symptom, to the outside of the carton.

Symptom

- Send the unit to an authorized servicenter, prepaid and adequately insured.
- Do not send your unit to the Panasonic Consumer Electronics Company listed below or to executive or regional sales offices. These locations do not repair consumer products.

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**Panasonic Consumer Electronics Company,
Division of Matsushita Electric Corporation of America**

One Panasonic Way, Secaucus, New Jersey 07094

**Panasonic Sales Company,
Division of Matsushita Electric of Puerto Rico, Inc.**

Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park
Carolina, Puerto Rico 00985